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Original Communications.

ARTICLE I.

ON THE CONDUCT OF THE THIRD STAGE OF LABOR.

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GENTLEMEN: — In venturing to occupy the time of the Society with some thoughts upon the management of the third stage of labor, I must ask the members present to descend from the elevated plane on which occult and abstruse questions are met, and where also rare and new experiences are encountered, to the common level of ordinary practice and observation. If the daily experience of the accoucheur is barren of startling incidents, it is nevertheless, to the thoughtful physician, clothed with peculiar interest: 1st, on account of the great number of cases, in ever varying forms, which constantly recur to claim his attention; and 2d, from the fact that apparently slight errors are so liable to lead to disastrous results.

Do I affirm too much in the intimation, that in a department

where the recuperative forces of nature seem almost unlimited, that familiarity is liable to lead to inattention in details, which may subvert these conservative forces of nature? Let any physician of considerable experience take a retrospect of his observation — I will not say here of *his own* experience, and I feel confident he will not fail to recall instances, and possibly many which will justify the assumption.

I doubt whether a greater diversity of practice, pursued by different physicians, will anywhere else be found, than prevails in the management of the third stage of labor — in the kind of assistance offered, in the time at which it is proferred, and in the manner of its execution. I have known physicians who, especially in sparsely settled sections of the country, seldom, if ever, make the second visit to their patients after delivery, and many times not even one visit to learn by personal examination the effects and results of the labor. I have seen a physician of many years' experience, after the delivery of his patient by the forceps, introduce his hand into the uterus and forcibly deliver the placenta within ten minutes, and bid his patient good-day in a few minutes after, without making any examination to ascertain the quality of the pulse or the condition of the uterus. Instances like these might be enumerated, till gentlemen would become weary of the detail.

Believing, as I do, that the third is the most important stage of labor, I have been frequently and strongly impressed with the suspicion — which suspicion has become a conviction — that the importance of this stage of labor is too generally underestimated.

Though the accoucheur should consult his watch and govern himself by the stereotyped admonition to remain with his patient at least an hour after the delivery of the placenta, he does not thereby discharge his whole duty in all cases. The third stage of labor is not completed when the placenta is delivered, nor until certain important conditions have been secured, which ensure the safety of the patient, though it require twelve hours to accomplish these.

As a guide to our duties, we may draw useful practical lessons from a study of the natural phenomena in cases requiring no assistance. First, however, I may be allowed to refer to the

normal connection between the uterus and placenta. This attachment is not effected by muscular, fibrous or cellular tissue, and does not extend deeper than the lining membrane of the uterus. The mucous membrane of the uterus lies in contact with the muscular tissue. In this, it differs from the arrangement found elsewhere, viz., that the mucous membrane is attached to organs through the intervention of a layer of sub-mucous cellular tissue. The endo-metrium receives innumerable vessels (some of which have but a single coat), which are distributed to and surround the utricular glands. This mucous membrane contributes to the development of the placenta. In this development the vessels become greatly enlarged, but their walls are not proportionally strengthened, so that the placenta is only held firmly *in situ*, while the normal conditions of gestation continue. These essential conditions are: 1st, the size of the placenta must increase *pari passu* with the segment of the uterus to which it is attached; and 2d, the counter pressure afforded by the liquor amnii must furnish the requisite amount of support to the placenta from within. Now, what is nature's mode of completing the third stage of labor? After the expulsion of the child, the uterus remains quiescent for a time, perhaps ten or fifteen minutes, then a slight dilatation of the organ is appreciable, which is immediately followed by contraction, and these alternate contractions continue till the placenta is separated and expelled from the uterus, requiring from half an hour to an hour; its extrusion from the vagina by natural forces may follow immediately or may be delayed.

These three stages in the expulsion of the placenta, viz.: 1st, the detachment; 2d, the expulsion from the uterus; and 3d, the expulsion from the vagina, are sufficiently distinct to be readily appreciated.

It is not only interesting but important to comprehend the conservative phenomena which take place in the uterus during this process of placental expulsion. Should the placenta be separated to a greater or less extent, as the child is expelled, which is usual, the contracted state of the uterus prevents hæmorrhage, and the quiescent condition permits coagula to form and seal the orifices of the sinuses, and this is repeated till the

entire separation is effected. By these means the patient is protected from hæmorrage after labor.

The first deduction from this study is that *time* is an important factor in the third stage of labor — time between uterine contractions, when the organ remains quiescent to permit the small coagula to form; 2d, the impropriety of agitating the uterus by immediate compression and kneading to hasten the delivery of the placenta. In many cases, nature may be aided in completing this stage of labor, but the assistance offered should not subvert the phenomena above described. When the placenta has been expelled from the uterus, nothing is to be gained by delay; then it may be lifted out of the vagina; or again, after detachment, should it lodge centrally over the os uteri, one border may be brought down by hooking the finger over it, when it will be delivered with facility.

In difficult labors the uterus may not contract upon the placenta as promptly or as efficiently as in the case described. Then more time should be allowed. The uterine contractions should accomplish the first stage of placental delivery, viz., its detachment. Hasty forcible detachment would manifestly thwart the natural process. When a physician frequently encounters hæmorrhage in this stage of labor, the inference cannot be avoided that the error of too great haste in extracting the placenta may explain the complication.

This brings me to the enumeration of the consequences of too sudden and forcible delivery of the placenta: 1st, liability to post partum hæmorrhage, which may immediately endanger the life of the patient, or if less severe, may lead to a slow recovery; but hæmorrhage is not the only or the greatest evil to be apprehended, for this can generally be controlled; 2d, blood will be retained in the imperfectly contracted uterus and sinuses which remain patulous, then decomposition of the retained blood, a frequent cause of after-pains, will take place, and septicæmia may follow.

Is this not the possible explanation of the cause of "milk fever," which some think is necessarily attendant upon the first active function of the mammary gland? To prove that febrile movement in the system, is not necessarily due to the secretion of

milk, requires only a little observation in cases managed in accordance with the principles already stated. 3d, subinvolution of the uterus, with all its secondary consequences, is another and more permanent complication which is liable to ensue.

To obviate or diminish these possible complications, various drugs and agents have been employed, all intended to fulfill one indication, viz., to secure prompt and permanent contraction of the uterus. Among these, ergot holds the first place, and is par excellence the remedy entitled to confidence, on account of its peculiar effect upon the uterus. I incline to the opinion that the only legitimate use of ergot in obstetric practice, is in post-delivery. It is many years since I have exhibited ergot to hasten the expulsion of the child. The contraction of the uterus, under the influence of this powerful agent, is so entirely different from the normal parturient action that we may well feel surprised when injury to the child or mother does not follow its use in the second stage of labor.

The profession has come to realize these dangers to some extent, and hence the caution given, not to administer ergot too early in labor or when there are obstructions to delivery. The tonic contraction of the uterus, produced by ergot, must compress the placenta continuously, and thus interfere with its function to a corresponding degree. At the same time the continuous pressure of the presenting part of the child upon the soft tissues of the mother cannot be other than injurious. I would always resort to other equally efficient and more harmless means to expedite the second stage of labor.

We hear less of hour-glass contraction and retention of the placenta, since ergot has been exhibited with caution. This leads to a brief consideration of the management in cases of retained placenta. The causes of this complication are various, but may be classified as follows: 1st, inertia of the uterus. 2d, irregular contractions of the uterus, and, 3d, abnormal adhesion of the placenta. If inertia be the cause of retained placenta, it frequently follows, and is caused by the exhaustion of muscular power, in "laborious labor," or it may be caused by the sudden artificial delivery of the child, instead of allowing the extremities

of the child to remain and stimulate the uterus to complete contraction as the extremities are expelled.

In such a case, if there be no hæmorrhage, and there will not be, unless detachment to a greater or less extent has taken place, time and restoratives are essential to the safe conclusion of the labor.

If hæmorrhage be present, indicating detachment to some extent, the complete separation of the placenta by the hand, and not by traction upon the cord, would be judicious, and at the same time and by the same means, the mechanical irritation of the uterus will ensure its contraction, which may then be kept up by ergot.

Irregular contraction of the uterus must usually be overcome by mechanical means. Should there, however, be no pressing necessity for prompt delivery, as there would be if hæmorrhage complicated the case, no haste in interfering or violence in operating would be justified. The time for operating will depend much upon the condition of the patient, and will be decided by the judgment of the practitioner in any given case. It will seldom occur that anything is to be gained by waiting longer than an hour and a half. Only one additional suggestion will be offered upon this point, and that is, the admonition not to act too rapidly. Acting continuously upon the uterus, by moderately extending force, for a sufficient length of time, will accomplish more and with safety to the tissues of the uterus, than greater violence applied suddenly. Great difficulty, and even temporary defeat, may be encountered by attempting to overcome the contraction and extract the placenta too suddenly.

Abnormal adhesion of the placenta occasionally causes its retention, not as frequently however as is supposed by some. Every placenta is adherent till the uterus contracts upon it. In the normal detachment the uterus is the active agent, while the placenta is passive. Abnormal adhesion of the placenta would appear to be a reasonable explanation of hour-glass contraction of the uterus. Encystment of the placenta may result from adhesion. In this condition the placenta may be retained in utero an indefinite length of time, without causing any marked symptoms, or becoming decomposed. I remember to have delivered a pla-

centa three days after the birth of the child. It was globular in form from the equable pressure of the uterus, which completely surrounded it, and in its structure showed not the least appearance of decomposition. Query, would it be possible in such a case for the placenta to disappear without expulsion? It has been affirmed that the placenta has been removed by absorption. In missed labor the soft tissues may be removed thus; a more wonderful phenomenon than would be the absorption of the placenta. The practical suggestion, in adherent placenta and hour-glass contraction, is to dilate the contracted portion of the uterus, and separate the placenta by the hand and deliver, being careful to secure general contraction of the uterus as it is relieved of the afterbirth. This operation should be undertaken as soon as we determine the complication. Nothing is gained by delay. I would never leave the patient till the case was completed.

RÉSUMÉ.

1st. Contractions of the uterus after the birth of the child are essential to complete the detachment and expulsion of the placenta first, and second to compress the sinuses and thus to prevent hæmorrhage.

2d. Periods of rest during this process are important, to permit the closing of the disrupted sinuses by sealing with coagula.

3d. The early agitation of the uterus by kneading and compression would defeat the conservative forces of nature in this stage of natural labor.

4th. Withhold ergot till the placenta is detached.

5th. Deliver the placenta by bringing it down edgewise with the hand, and not by traction upon the cord.

6th. Inertia of the uterus without hæmorrhage requires time and restoratives.

7th. Inertia of the uterus with hæmorrhage, introduce the hand to deliver the placenta, and at the same time secure contraction.

8th. Irregular contraction is best overcome by moderate force, continuously applied.

9th. Abnormal adhesion requires artificial interference so soon as the diagnosis is made.

ARTICLE II.

A LESSON FROM OVARIOTOMIES.

By J. T. Everett, A.M., M.D., Sterling, Ill.

The knowledge acquired by failures is food less palatable than nutritious. It is more unpleasant to publish our unsuccessful than our successful operations. Where, however, a lesson is to be learned, they are just as much the property of the profession as our most brilliant achievements.

Case I, was performed November 17, 1872, and reported in the *Chicago Medical Examiner* for April, 1873. Patient, 41 years of age, complaining of pain in the back, increased nervousness and epigastric neuralgia; lump in left ovarian region the size of an adult head. Bimanual palpation gave distinct fluctuation and wave motion, and the hypodermic needle withdrew clear, straw-colored serum, containing albumen and ovarian cells.

On the 16th, an active cathartic was given, and after the bowels had been thoroughly evacuated, a suppository of 0.6 gms. pulv. opii was inserted. The bladder was then entirely emptied by means of the catheter, and with the assistance of Drs. Hunt and Newton, I proceeded to operate in the following manner:

The patient having been fully anæsthetized, an incision eight centimeters in length was made along the linea alba, midway between the symphysis and the umbilicus. On reaching the peritoneum, this membrane was raised and nicked, and divided upon the grooved director. The sac was next examined and found to be a monocyst, and non-adherent. The sac was next evacuated, fortunately without the escape of a drop of the cystic contents into the peritoneal cavity. The tumor was then lifted out of its bed, the pedicle transfixed by a needle carrying a double carbolized animal ligature, which was tied each way and cut short. The pedicle was then pared off and dropped into the abdominal cavity. The previous superficial hæmorrhage from the lesser branches of the epigastric artery, with their accompanying veins, having been entirely controlled at the time of their division, there

was no perceptible exudation of any kind into the peritoneal cavity. This was next carefully sponged out with warm carbolated water, to make assurance doubly sure, and to guard against any possible septic contamination. The abdominal walls were next brought together and secured with quilled sutures of silver wire, a film of carbolated collodium placed over the incision, this in turn covered with a layer of cotton saturated with carbolized oil, and over all a wide flannel bandage. The patient was kept under the influence of morphia administered hypodermically for several days, with a free use of tr. ferri chloridi, and quinia.

On the 23d, the bowels were evacuated. On the 24th, a slight puffiness appeared at the lower end of the incision, and on removing the dressing about 128 CC. of clear serum escaped. The orifice was again closed, and healed rapidly.

Recovery fully established at the end of the fourth week. The sac and contents weighed nearly 5 kilograms.

Case II. Was called September 3, 1872, to see Mrs. A. M., aged 32 years, multipara, anæmic, with marked specific symptoms. Complained of severe epigastric pains, neuralgia and bearing down in back and bowels. Examination revealed an eroded os, from which oozed a thick ropy secretion. Distended abdomen, of the size of pregnancy at the 7th month. Circumference at hips, 91 Cm.; circumference at umbilicus, 108 Cm.; circumference at ensiform cartilage, 81 Cm. Bimanual palpation gave distinct fluctuation and wave motion.

I inserted three insulated silver needles 14 Cm. into the most prominent portion of the cyst and attached the negative pole of a 20-cell zinc carbon battery, the positive pole being placed over the sacro-lumbar junction. This current was allowed to flow through the tumor for 5 minutes.

September 8.—Patient has felt no bad results from the treatment, but owing perhaps to the constitutional and local treatment is feeling stronger and has less pain. On measurement, the umbilical diameter was found to have decreased to 81 Cm. Same treatment.

September 15.—Found patient still better; umbilical diameter 71 Cm. Patient gradually improved until entire recovery took place. Was lost sight of for three years, when she was

again examined, and no trace of cyst was discoverable except an enlarged ovary, with some bloating and pelvic adhesions and tenderness.

Case III. Saw Mrs F. H. May 10, 1873; multipara, aged 26; general health good, but suffering much mental trouble on account of a growth in left ovarian region, the size of the adult head. Examination revealed womb nearly normal; bi-manual palpation gave clear fluctuation and wave motion.

To confirm diagnosis of ovarian cyst, the hypodermic needle was thrust into the most prominent part of the tumor and withdrawn with clear fluid about the consistence of glycerine, which showed, under the microscope, well-defined ovarian corpuscles, and gave the reaction of albumen, and traces of paralbumen.

At first sitting, a needle was introduced 10 Cm. into the sac, and a 20-cell current passed for five minutes, as in the preceding case. 16th.—Same treated repeated. 22d. Same treatment. 29th. Tumor less in size; repeated treatment.

June 5th and 12th.—Treatments repeated; tumor reduced one-half in size, and more dense to the touch; catamenia appeared on the 15th, more profuse than usual. 20th.— Repeated treatment; tumor still decreasing slowly. Eight more treatments were given at weekly intervals before the growth entirely disappeared. Patient has since borne a child, and is now enjoying good health.

The query arises, why should this small tumor require fifteen sittings for its destruction, while one nearly twice the size disappeared rapidly after only three treatments? Was the previous case one of monocystic tumor, and were the whole contents changed in character by the electric current, and thus more rapidly absorbed? And in the present case, was each separate cyst of a polycystic tumor decomposed and absorbed before the next could be reached and cured?

Case IV. (*a*) December 8th, 1873, saw Mrs. S. W. Multipara, formerly in robust health; but now presenting the peculiar facial characteristics of ovarian trouble. Had noticed the growth for four years, with constantly increasing symptoms of pain in the back and loins, with epigastric neuralgia, great nervousness and exhaustion. Vaginal examination revealed soft, flabby os; uterus pushed over to the right side and low down. Tumor

extending from true pelvis to ensiform cartilage. Umbilical circumference, 124 Cm. Inserted three platinum needles 18 Cm. into the cyst and passed a 30 cell current for 20 minutes, in the same manner as in the two previous cases. The patient was now allowed an hour's rest, and as I had to return to the city, the current was again used in like manner for 30 minutes. Patient was left, after ordering a supporting treatment, and rapidly improved. At the end of the third week the umbilical diameter reached 76 Cm. Tumor rapidly disappeared, and at the end of the first year she considered herself perfectly well.

In the spring of 1878, five years from the time of the supposed cure, I reported the last three cases to Dr. Paul F. Mundé, who incorporated them in his list of cases successfully treated by electrolysis, in the paper which he prepared on "Electrolysis of Ovarian Tumors," for Vol. II of the Transactions of the American Gynæcological Society.

The following case shows that the cure was not permanent:

Case IV (*b*).—Was called Sept. 30th, 1878, to see Mrs. S. W., whom I had cured (?) in 1873 by electrolysis. Found that the tumor had returned with all the concomitant symptoms of true ovarian tumor, and was of the size of pregnancy at term. Hypodermic needle withdrew a clear, viscid, straw-colored fluid. As the patient lived 20 miles from the city, and as circumstances precluded my making another visit — although armed only with an ordinary pocket case of instruments — I concluded to operate. With the assistance of Drs. Freer, Smith and Fergus, I operated in the usual manner.

The bowels having been thoroughly evacuated by a copious injection (there being no time for a cathartic to act), a hypodermic injection of .02 Gms. of morphia was given, and the patient thoroughly anæsthetized by Dr. Freer.

The urine remaining in the bladder was drawn off and an incision 10 Cm. in length was made along the linea alba, midway between the symphysis pubis and the umbilicus. Upon reaching the peritoneum, this membrane was divided upon the director, after having controlled the superficial hæmorrhage from the twigs of the epigastric vessels.

The sac was now seized with two pairs of rat-toothed forceps,

one on each side, and held well up against the cut margin of the peritoneum, and then divided with the bistoury. Fortunately but very little of the cyst contents entered the abdominal cavity. After the cyst was nearly emptied, it was drawn out, the pedicle transfixed with a needle carrying a double silver wire ligature, which was cut and tied each way. The pedicle was cut short and dropped back; the abdominal cavity carefully sponged out with warm carbolated water, and the walls approximated with silver wire interrupted sutures. Over all a coating of carbolized oil, on cotton, and this retained in place by a flannel bandage. The sac and contents weighed 13.6 kilograms.

The patient was placed in bed, and left in the care of Dr. Freer, who has just furnished me with the subsequent history of the case.

Patient kept well under the influence of morphia for the first two or three days, with free use of iron and quinine. On the sixth day, bowels moved spontaneously; sutures removed on the 10th, leaving good, strong cicatrix. Patient did not have a single untoward symptom through the whole time, but made a rapid recovery, and is now apparently as well as ever, with slight tenderness over the line of the incision. Menstruation appeared at the second month, and has recurred regularly ever since.

Case V. — Was called, Dec. 11th, 1878, to see Mrs. A. C., aged 52, multipara, naturally very robust. I learned that patient had been troubled somewhat with pelvic pains for several years.

About three years ago she first noticed abdominal enlargement, which at first was ascribed to natural causes; but after reaching full period and no change taking place except a constant increase in size, some uneasiness was felt, but still no advice was sought until about two months previous to my visit, when symptoms of a low type of fever setting in, a physician was summoned, who prescribed symptomatically, and treated the case very ably, but still failed to arrive at a full diagnosis of the case. The patient grew gradually worse, notwithstanding the well directed efforts of the physician to build up the patient, until, at my first visit, the distension of the abdomen was such as to interfere materially with respiration and nutrition. The patient had not been able to assume the recumbent position for the last three days. Had

not slept any for 48 hours. Exhaustion and carbonization of the blood had greatly impaired the intellection. In fact the appearances were, that the patient could not last many hours without immediate relief. On making out the diagnosis, which was not difficult, I informed the family of the same, and advised aspiration as a palliative measure. This was at once consented to, and I immediately drew off 6.13 kilograms of clear, transparent, ropy fluid. This sac being emptied, and the needle withdrawn, the patient lay back on the bed, gave a sigh of relief, and said, "Now I feel easy, and can sleep." She at once dropped into a quiet sleep, and rested nicely until morning. The next morning I aspirated another cyst, but the contents were too viscid to pass through the needle; therefore I withdrew it, and in its place inserted a trochar having the capacity of .03 Cm.; through this escaped only a small quantity, when it became clogged by a mass of floating fibrin, and the attempt was given up and the trochar withdrawn.

I now left the patient, with directions for tonic and stimulating treatment.

Dec. 17th I saw the patient again, and notwithstanding the gravity of the case, found her somewhat improved. Again aspirated with large needle and withdrew 6.59 kilograms of thick, ropy contents, of the consistence and appearance of soft soap. The friends requested an early operation, they having been previously made acquainted with the probabilities in the case.

Dec. 21st, I found patient much the same, and evacuated two more sacs of 2 kilograms each. I informed the family that, in the present condition of the patient, I could not advise an operation, but as that held out the only chance of saving or prolonging the patient's life, I would operate if they requested. This being their wish, I visited the patient Dec. 24th, finding her in the same condition as on the previous occasion. With the assistance of Drs. Gillespie and Mosher, I proceeded to operate in the following manner:—

The bowels and bladder having been previously evacuated, a suppository of opium was introduced. The patient was then anæsthetized with chloroform by Dr. Gillespie. The spray apparatus was consigned to the care of Dr. Mosher, who also

rendered such operative assistance as the case required. On opening the abdominal cavity, the adhesions between the peritoneum and the sac were so dense and extensive that it required the utmost care to distinguish the one from the other.

The adhesions were at length carefully broken up with the hand, and, on attempting to thrust the "Spencer Wells trochar" into the most prominent sac, its friable walls ruptured like so much wet paper, and allowed the contents to escape into the pelvic and abdominal cavities. The remaining sacs, four in number, were then rapidly evacuated, and the tumor lifted out; its pedicle was transfixed by a needle carrying a double silk ligature, which was cut and tied each way.

The pedicle was then cut off 1 Cm. from the ligature, and dropped into the abdominal cavity, the ends of the ligature being brought out at the lower angle of the wound.

The walls were carefully sponged out with warm, carbolated water; and, after having been exposed to a strong light, to make sure that all hæmorrhage from the ruptured vessels in the adhesions had been entirely controlled, were brought together with nine interrupted silver sutures. Between each a long, adhesive strap enclosed half the abdominal circumference. Over this was placed a dressing of carbolated cotton — this held in place by a wide flannel bandage.

The patient reacted nicely from the anæsthetic and shock, and for six hours appeared to be doing extremely well. Soon, however, I detected a failure in the volume of the radial pulse, which led to the suspicion that passive hæmorrhage was taking place from the myriad minute vessels which had been torn in breaking up the abdominal adhesions. Examination confirmed this suspicion, and, in spite of every effort to check this, the patient expired in four and one-half hours, from exhaustion. Notwithstanding the various aspirations, the tumor weighed 31.63 kilograms. A small sac at the posterior part of the tumor was found to contain nearly five kilograms of clear pus.

The chief regret is that the case was not seen at an earlier date, before disease had so far exhausted the strength of the patient that the tonic contractions of the minute vessels might have persisted in controlling the hæmorrhage.

Case VI. Was called Nov. 13th, 1878, to see Mrs. S. F., aged 58. Multipara, small and active. I found the patient had been suffering. for some two years, with severe epigastric neuralgia, pain in the back and nervousness. Examination revealed a fluctuating tumor extending from the cul-de-sac of Douglass to the ensiform cartilage. Wave motion was not distinct. The womb and bladder were drawn far up out of place; the margin of the os being two centimeters above the crest of the pubis. I aspirated from the vagina and drew off one kilogram of clear transparent fluid, the consistence of glycerine. With the needle still *in situ*, after having emptied the sac, attached the negative pole of an 18 cell zinc-carbon battery with the positive over the abdomen, I allowed the current to flow ten minutes.

November 17th. Circumference at the most prominent part of the tumor has decreased fifteen centimeters; passed the continuous current, from vagina to umbilicus, with 18 cells. November 23d, I aspirated at the umbilicus and evacuated another sac containing, one kilogram of clear amber-colored fluid and passed the same current for ten minutes from aspirator needle to sacrum. November 30th, I aspirated in left superior inguinal region and obtained only a small amount of reddish serum, and passed the same current through the tumor. The abdominal dimensions diminished eight centimeters. December 4th, I aspirated in the right umbilical region and obtained two kilograms of clear serum. I sent a specimen of this fluid, and also that from case V., to Prof. Wm. H. Byford, of Chicago, who, without any data whatever, from microscopical examination, confirmed my diagnosis of ovarian cyst in case V. and of ovarian and ligamentous cysts in case VI. December 17th, I aspirated from the vagina and drew off one kilogram; the patient complained that the treatment following this aspiration gave more pain than usual. December 26th, I aspirated and drew off two kilograms of serum; the tumor has decreased four centimeters since last treatment. January 2d, I saw the patient, who was suffering from intense pain in the small of the back; urine scanty and high colored, bowels constipated for several days, some febrile symptoms and chills. I gave quinine to counteract any malarial or septic poison and morphia to relieve pain; also ordered a laxative.

January 5th: The bowels have not moved, urine scanty; I introduced a catheter, which withdrew only a small quantity; I ordered a stronger cathartic and an injection in case the latter failed; pain less and fever not so marked; no chill since last visit. January 8th: No movement; some vomiting; injection was a complete failure; otherwise the patient is better; attached stomach tube to syringe and attempted to pass well up into the colon; found resisting obstructions ten or fifteen centimeters from rectum, beyond which neither tube nor fluid could be passed; hot fermentations were ordered over the bowels, in hopes of relaxing the parts. January 10th I found the patient but slightly rallied, she had had no movement; urine slightly better; on explaining the probable complication to the patient and family and advising an immediate operation, as the only possible chance of prolonging life, they at once consented; with the assistance of Dr. S. W. Gillespie, the only medical gentleman at hand, and the very able help of Mrs. Z. Hawley, I proceeded to operate under the carbolized spray. On opening the abdominal cavity in the usual manner, the displaced uterus and bladder presented upon the anterior aspect of the tumor; these organs were then pushed as much as possible out of the way and the dense adhesions of the tumor to the peritoneum were broken up with the hand. This having been carefully and expeditiously accomplished, the division of the broad ligament was commenced, and he who has attempted to remove the entire broad ligament in a cystic degeneration with its vessels enlarged and engorged, can well appreciate the task. With the dense adhesions in the cul-de-sac of Douglas, and the careful separation of the posterior membranes from the pelvic viscera, the time consumed in the removal was forty minutes. The right ovary, which formed a portion of the cystic mass, was next lifted up, its pedicle transfixed and tied each way. The cysts, fifteen in number, were then evacuated with the "Spencer Wells" trochar, the pedicle cut and secured, and the mass lifted out of the abdominal cavity. In doing this, the pressure ruptured a sac at the posterior aspect of the mass, and allowed a large quantity of decomposed pus to escape into the pelvic and abdominal cavities, bathing the freshly torn surfaces with this morbid agent. This was at once sponged out with warm

carbolated water, and after ascertaining that there were no bleeding twigs, the walls were approximated with eight silver wire sutures, a strong strip of adhesive strap applied between each suture, a layer of carbolated cotton placed over the the incision and the whole secured by a wide flannel bandage.

The patient rallied well from the anæsthetic and operation, and, upon being told of the accident, replied she was glad the attempt had been made, and that it was an accident no care could have guarded against. After this, the patient conversed with her friends and left directions, messages, etc. About six hours from the time of the completion of the operation she began to fall into a lethargic condition, which continued to increase in spite of all efforts to stimulate, and ten hours from the operation death put an end to the scene, the patient falling into a profound coma. There was no hæmorrhage after the operation, and although, of necessity, there was considerable during that time, yet not enough to materially weaken the patient; every step being finished before the next was commenced.

Was the lethargic coma the result of the rapid absorption of pus by the peritoneal vessels or was it the result of exhaustion? The pulse was good until within two or three hours of death, and there were no signs of weakness; nothing except the heavy breathing, growing slower and slower until it ceased entirely. The reaction from the anæsthetic was most perfect.

Although the course pursued in the two cases last recorded was not crowned with success, yet the operations were just as imperative, and perhaps more so, than in the previous cases. For, in these two cases, operative procedure was the only chance of evading certain, speedy and painful death. While the chances were, of course, very much against recovery, yet we should avail ourselves of that chance whenever practicable.

While it is to be regretted that in case V the true pathology was not sooner understood, and, while in the condition in which the patient was found, death was the *probable* result of an operation, yet, if left to nature, the same result would have been sure and speedy.

In case VI, with the complication of an ovarian and ligamentous cyst, procrastination was one of the fatal factors. Although

the necessary laceration of peritoneal tissue in the removal of the entire broad ligament caused by the large dense adhesions, was a grave factor, yet it was not necessarily fatal. This case had been diagnosticated during a period of two years as ovaritis, fibroma, sarcoma, retro-uterine hematocele, and even pregnancy. Amidst all these conflicting diagnoses, the wonder is that the true pathology was not stumbled upon. In this case the query arises, would it not have been better to have operated at once instead of attempting palliative measures? The weight of authority seems to be, in similar cases, to aspirate and only to operate as a last resort. In this case it is highly probable that the repeated aspirations favored the formation of the extensive and dense adhesions, by setting by circumscribed points of sub-acute peritonitis. Although there was no evidence of this, either upon the anterior or inferior posterior aspect of the tumor—the adhesions being universally dense and compact—yet the fear that this might have been instrumental in producing the result, prompts us to examine the case critically before dismissing it from our minds. The adhesions in the true pelvis were well marked when the case was first seen, and the commencement was referred by the patient to exposure and an uncomfortable position sustained during a journey of ten miles on an intensely cold day. Three vaginal aspirations were made during the treatment, and a careful examination gave no indication of their locality, on inspection after the operation; leading to the conclusion that their local results had disappeared.

ARTICLE III.

OF MISCARRIAGE, AND ESPECIALLY OF THE USE OF LOOMIS' FORCEPS IN ITS MANAGEMENT.

By Henry A. Martin, M.D., of Boston, Mass. Read before the Norfolk Medical Society, Dec. 11th, 1877.

It is not my intention to offer a paper on the whole very important subject of *abortion*, but merely a few remarks on the treatment of a class of cases, of very frequent occurrence, and very often of a very tedious and troublesome character. That

I should make these remarks was the suggestion of one of our younger members, who was very much struck by the facility with which the contents of the uterus were removed by the use of an instrument not so generally known and appreciated as it should be. What was novel and interesting to him he thought might be also new and interesting to others, and hence his suggestion.

Honest miscarriage is a very frequent occurrence among the lower laboring classes, as a result of hard work and all the various shocks which that sort of flesh is heir to. *Dis*honest miscarriage is a very frequent occurrence in the upper and so-called better classes, principally as a result of criminal proceedings with the special object of inducing it. In thirty-three years of practice I have treated a very large number of cases of unpremeditated abortion, a certain number in which I ascertained it to be intentionally induced, and a good many in which I was informed that it was accidental, but in which I felt very confident that it was not so. I do not propose at all to discourse upon the moral aspect of abortion and have felt very little inclined that way since hearing, many years since, a very moral and highly Pecksniffian oration on the subject from one of our brethren, who to my certain and absolute knowledge, had added largely to his income by the practice of this infernal specialty.

Whether accidentally or intentionally induced, there is very little difference in the character and difficulties which abortion presents to the practitioner. However produced, there is one thing essential in the treatment of these cases, viz., to empty the uterus as soon as that can be done with safety, to thoroughly ascertain that it is entirely emptied and never to cease supervision of the case until that end is accomplished. So long as a particle of the ovum remains in the uterus there is danger, great and imminent danger of exhausting and most permanently injurious, if not fatal, hæmorrhage, a lesser and less imminent danger of septic absorption and its miserable train of consequences. The books tell you that when called to a case of threatened miscarriage, with intermitting contractions of uterus, discharge of coagula, pain in the back, etc., you are to give opium, prescribe the recumbent position and take various other steps, all with a view

of arresting abortion and saving fœtal life. I have repeatedly followed these time-honored directions; in some instances I have succeeded in postponing the completion of abortion for weeks, even months, but never that I can remember in preventing its final accomplishment. That in some cases of threatened abortion it is worth while to pursue treatment in the hope of averting it I will not deny, but in a very large proportion of these cases such treatment is bad, serving only to protract the duration of the case and aggravate the injury to the health of the mother. In certainly ninety per cent. of all the cases I have seen, the thing clearly to be done, and as soon as possible, without violence and undue manipulation, has been to empty the uterus.

How is this to be done? In some few cases very easily; cases in which the os uteri is sufficiently dilated and the ovum or its remains sufficiently protruded and accessible. In such cases, the patient lying on the left side, in the usual position, the left hand of the physician applied with moderate pressure to the lower part of the abdomen over the fundus, the two first fingers of the right hand introduced into the vagina seize the protruded portion of the ovum between them, and by gentle, steady, gradual traction all may be removed *en masse*. Simple as is this little operation, I have known a case in which a woman came very near to death for want of it. A practitioner was called to a woman with the usual symptoms of abortion, was told by the attendant beldame that "it" had all "come away." He took her word for it and visited the patient daily with laudable assiduity, doubtless not forgetting each day to charge his visit. Every day and all day she bled; he gave opium, sugar of lead, brandy, beef tea and all the rest of it, but never made an examination *per vaginam*, because the old woman had told him that all had "come away," although indeed nothing had been discharged but the fœtus; a very frequent mistake and one against which the physician should always be on guard. On the evening of the ninth day of his attendance he informed the husband that although he had done so much, had done everything, the woman would almost surely die within twenty-four hours.

Under these circumstances I was called in, removed with my fingers and with the utmost ease, a mass of coagulum and *debris*

of the ovum of the size of a large English walnut, in a putrescent state, which was lying just within the os uteri. A full dose of ergot was given, bleeding stopped at once and, after a few days of doubt, the woman rapidly recovered. I was quite unaware, when I made the visit, that any physician had been in attendance and rated the husband soundly for his neglect only to be told that an experienced one had been in daily attendance for nine days. The doctor was, I believe, very indignant that I stepped in to invalidate his prognosis, and I, suppose, if I had known of his attendance, which I am very glad I did not, that medical etiquette would have demanded this in addition to an army of previous similar victims. This case illustrates the absurdity of depending on the statement of anybody in regard to the evacuation of the uterus in these cases. I always ask to *see* what has been discharged, examine this completely. If I find what satisfies me *perfectly* that the ovum has been *entirely* expelled, I save myself and the patient the trouble of an examination ; but I do not find this in one case in twenty. The fœtus, almost always, except in very early abortions, comes away separately and alone ; this is one of the earliest, sometimes *the* earliest symptom. It is a very common notion with even the most erudite of the matrons who infest these cases ; ladies who repel with great scorn and feeling the slightest imputation on the accuracy and fullness of their knowledge and experience, that this is all that is to come. Sometimes a number of coagula are expelled ; some of these often present an appearance of and, on examination, even a pseudo-membranous texture in parts which may deceive the inexperienced practitioner and lead him to suppose that the total membrane and elementary placenta is present, but if carefully broken up in a basin of water it becomes evident that they are but masses of coagulated blood. Such masses in the uterus and protruding through the os are sometimes mistaken for the ovum, are removed and attendance discontinued, when in fact nothing has really been accomplished for the patient's relief.

In some cases you will find the membranes protruding from the os so that they may be seized between the fingers or the jaws of a polypus or other similar forceps, or by some such instrument as Dewees' placental hook ; but the part seized breaking away, the

main mass remains unmoved, and this removal of its lower and accessible portion renders the case much more unmanageable. Sometimes you will be able to barely touch the lower extremity of the intra-uterine mass with the tip of the exploring finger, but quite unable to seize it between the fingers or to hook the fore-finger over or into the mass so as to remove it. I need not, however, enter into an elaborate enumeration of the various difficulties found in these cases, due to (1) the friable nature of the mass to be removed; (2) an undilated condition of the os and cervix uteri; (3) the adherence of a portion of the mass to the uterine wall. They are familiar to all who have had any considerable experience in such cases and may be imagined by those who have not. To the theoretical student or practitioner it may seem a very simple and easy matter to take almost any sort of crotchet or hook, like that devised by Dewees, or any sort of a polypus or uterine forceps and remove the aborted ovum. Practically, however, it is by no means an easy matter. It is very easy generally to remove the lower portion of the mass, but doing this is doing nothing, less than nothing. So long as any portion remains in the uterus, any portion however small, attached to the uterine wall, the dangers of the case still remain. The books tell you to wait, to thrust a sponge tent into the os sometimes, to tampon the vagina; the first with a view to dilate the os and so enable the operator to reach and remove the ovum, and the second to prevent injury or even fatal loss of blood from the often very profuse hæmorrhage.

Lately an instrument with the fascinating name of *Colpeurynter*, has been invented by a Dr. Braun, and is much admired by that modern school of physicians (so much lauded by our precious *Boston Medical Journal*), who are ready to applaud any gim-crack so it be invented in Germany, and by those who have never attended a single bad case of hæmorrhage from abortion. It is a bag of thin smooth rubber; introduced into the vagina in a flaccid empty state, it is then distended with air by means of a sort of bellows, and is intended as a substitute for the old fashioned tampon composed of soft old rags, raw cotton, sponges, or similar substances. The tampon is bad enough, but if properly introduced, which it generally is not, it is pretty effectual in pre-

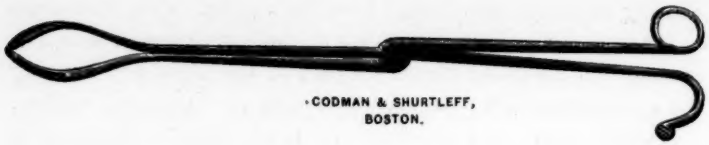
venting excessive hæmorrhage from the vagina. One of its great advantages, arises from the nature of the substances of which it is composed absorbing the serous part of the blood and favoring the formation of firm coagula which cling to its ragged surface. The *colpeurynter*, as a substitute for it in cases where any such appliance is at all desirable, is good for nothing. If sufficiently distended to be effectual it is the cause of great pain and almost intolerable distress. For a few minutes, so distended, it may prevent the flow of blood past it, but does so only for a few minutes, after which the fluid blood finds a free passage between its smooth surface and the expanded and expanding wall.

When the first *colpeurynter* was brought to Boston it was exhibited to an admiring company of physicians. I alone objected to it, theoretically, and since that time my objection to it, at any rate as a substitute for the tampon, has been amply sustained by practical observation and experience. It is worthless, worse than worthless, for the inexperienced physician, having introduced it, relies on it while his patient is bleeding excessively, perhaps to death or very near it.

That it may be and is of use in some of the requirements of gynæcology, I am well aware. My objections to it are as a substitute for the tampon as a means of preventing excessive uterine hæmorrhage. It is not, however, necessary for me to further discuss this very over-estimated novelty. In the vast proportion of cases in which either the tampon or *colpeurynter* is employed neither is necessary or advisable. The cases may be easily and safely terminated, so far as removal of the ovum and consequent cessation of hæmorrhage is concerned, by the proper and skilful use of the very ingenious instrument called *Loomis' forceps*.

I am quite unable to give you any account of the time and place of its invention and it is needless for me to describe it very elaborately, as I offer it for your examination.

[Through the courteous loan, from Messrs. Codman & Shurtleff, of a *cliche* from one of their wood-cuts, I am enabled to introduce here excellent illustrations of Loomis' forceps. (1.) With the blades as when the ovum is embraced between them; (2), the blades, one within the other, as they should be when introduced into the uterus.]



I purchased this instrument more than ten years ago. I have used it in a great many, probably hundreds of cases, and since I became quite familiar with the proper method of using it, with *invariable* satisfaction and success. I strongly commend it to your consideration and adoption. You will perceive that it consists essentially of two miniature curved fenestrated blades like those of an ordinary obstetric forceps, attached to shanks, at the extremity of one of which is a ring like that of the proximal end of a scissor blade, while at the extremity of the other is a sort of hook or crotchet which fits over the outside of the ring. The entire length of the instrument is about 14 inches. Midway in this length the two shanks are united by a very ingenious mechanical device, a joint, the technical name of which I am ignorant of, but by means of which the blade connected with the hooked handle may be made to revolve to a certain limited extent. It is not very easy to describe the instrument intelligibly but you see at once, on examination, the peculiar mechanism and its object. When the hooked handle is applied to the outside of the ring the two curved rings lie closely one within the other, just like two spoons laid together. With the two blades so laid one within the other the instrument is ready for use. The patient is to be laid on the left side, with the breech at the very edge of the bed, the trunk at an angle of 45 degrees, with its side and the knees well drawn up towards the chest. The tip of the forefinger of the left hand of the operator is to be applied to the posterior side of the *os uteri*. The instrument, properly warmed and well smeared with lard or cosmoline or vaseline, either of the latter the best possible substance for such purposes, held in the right hand, is to be introduced. The convex surface of the conjoined blades gliding over the left forefinger to the *os* are to be gently passed into

the uterine cavity with care, that they be made to sweep over its posterior wall. Unless the *os* is very unusually rigid and undilatable this can almost always be done very easily. Even where there is considerable rigidity and deficient dilatation, a little gentle manipulation will enable the blades to pass beyond the cervix. In some cases it may be necessary to introduce a sponge tent to sufficiently dilate the cervix to admit the instrument. This is something, however, that I am very much disinclined to do, feeling sure that the introduction of tents of compressed sponge is by no means so universally innocuous a proceeding as seems to be thought by many practitioners. I have found it necessary to dilate the *os* by sponge tents in but two cases of miscarriage. Generally a few minutes gentle dilatation with the forefinger will be sufficient. I need hardly say that all manipulation, whether with the finger or the instrument, should be gentle, as indeed in all obstetric operations. There can be no doubt that obstetric operators are sometimes oblivious of those two precious axioms *festina lente* and *arte non vi*, but although some of the operative proceedings in this branch of surgery require very considerable muscular strength, it should be strength tempered by gentleness, and this I have more than once witnessed *not* to be the opinion, or at any rate *the practice*, of men who, deservedly or not, have stood very high in the obstetric part of our profession. It is very important that the convex surface of the conjoined blades should be pressed against and glide over the posterior wall of the uterus. If this is not carefully attended to the point of the instrument is pressed against the lower extremity of the mass to be removed, the operator thinks that it has reached the *fundus*, takes the next step of the operation, and withdrawing the instrument, necessarily withdraws nothing with it, and accomplishes nothing. If the instrument is properly introduced its extremity reaches the fundus with great ease. When this is accomplished in an abortion at the most usual time, say fourteen weeks, it will be found that the entire fenestrated portion and from one inch to even two inches more of the instrument has passed beyond the *os*. When the extremity of the blades has reached the *fundus*, to do which, in some cases a portion of the ovum is separated from the uterine wall, the next step is to de-

tach the crotchet from the ring handle to the right, slowly turning it in that direction till it has described half of a circle. When this is done, supposing the blades to have been fully introduced to the fundus, the contents of the uterus are necessarily included between them. The handles should next be made to revolve together once, with a view to fully detaching the *ovum* from the uterine wall. If the *cervix* is sufficiently dilated there is nothing more to do but to withdraw the instrument, which will be found to bring away the *ovum* or all of it that may have remained in the uterus. In many cases, however, the expanded blades cannot be withdrawn. In such cases the forefinger or two first fingers of the left hand must firmly support the uterus while gentle traction with the movement which the French call "a bascule," should be made with a view to dilate the *cervix*. In many cases a very slight amount of dilating force applied from within, in the end, will accomplish sufficient dilatation. In others, five or ten of patient, gentle dilatation may be necessary before the blades can be easily and safely withdrawn. In some cases, a small proportion of all, it may not be possible to withraw the expanded blades without an amount of manipulation hardly to be advised. In these cases it is well to withdraw the instrument and to re-introduce it with the blades applied to each other not so closely as before directed, but so that when introduced to the ovum they may be opened like the mandibles of a duck, pushed up towards the *fundus*, one blade gliding over the posterior, the other over the anterior wall of the uterus, with the intention of including the ovum between them. When this has been done. the operator brings the blades together as when the instrument was first introduced, and when it is withdrawn it will generally be found to bring the ovum or its *debris* with it. It is not easy for an unpracticed writer to describe very intelligently the simplest operation of surgery, and I can hardly hope to have succeeded where so many fail, but nothing can be simpler or more effective than this operation, if its different steps are deliberately and properly taken. The position of the patient is very important to a proper, easy and effectual accomplishment of its object. I know no instrument devised for the very important end of removing the *ovum* in abortion at all comparable in efficacy with this. With

the smaller bladed instrument* there are very few cases of miscarriage in which the great end of safe and rapid detachment and removal of the *ovum* cannot be accomplished. To gentlemen who have had no practical experience, sundry devices of the instrument-makers seem very charming, which, in practice, are found to be worse than worthless, and I know no other instrument with which it will not be found very difficult indeed, often impossible, to accomplish the *perfect* removal of the *ovum*. The object of this paper was chiefly to describe the use of *Loomis' Forceps*, and I have little more to say except a few words on a class of cases of abortion, very likely to deceive the practitioner if he depends on a partial removal of the ovum and trusts to luck that the rest will take care of itself. In a certain proportion of cases the ovum is very firmly attached to or near the fundus. The practitioner may pick away with his fingers or some hook or forceps, a large part of it; he may now think that he has got all away, for by an ordinary examination his forefinger discovers nothing remaining in the uterine cavity, and still he has really accomplished nothing, for at the *fundus* remains firmly attached, that portion of the chorion in which has commenced, or if abortion had not occurred would have soon been developed the formation of the placated mass. So long as a particle of this remains, there is no safety from hæmorrhage. I have known bleeding to go on for weeks, for months, when its only and unsuspected cause was a portion of the membrane of the ovum not larger than a cent, attached to the *fundus*. If a second physician had not been called in and by prompt and decided measures removed this placental atom, the patient would most surely have died, as it was she barely escaped. I have known a case of miscarriage at the end of the fifth month, in which a midwife forcibly extracted the placenta, or thought she had done so. The woman got up in a few days, and went about her usual avocations; five weeks after getting up, while standing in her kitchen, all at once a large black mass fell from vagina to the floor, and she began to flow very freely. She fainted, and I was sent for. I found on the

* The instrument which I have always employed is of the sort which was made at first with unnecessarily large blades. A smaller and lighter instrument is now made and is to be preferred. One of these was exhibited to the society when the paper was read.

floor an immense coagulum exactly moulded to the cavity of the distended uterus, and a profuse hæmorrhage going on. I passed my hand into the vagina, found the os well dilated, and after cleaning out much coagulated blood from the cavity of the uterus, discovered firmly attached, a little to one side of the *fundus*, a mass of the size of a medium English walnut, which, with some difficulty, I detached and took away. It was a piece of the placenta which the midwife had failed to remove six weeks before. It was firmly attached to the uterine wall, was not at all decomposed, and indeed seemed attached to the uterus in such a way as to be nourished by the vascular supply of the uterus. I could narrate, from my own experience, a great many illustrations of the great importance of removing every particle of the *ovum* in cases of abortion, but it is needless. I have no doubt that you all fully appreciate the importance of doing so, and my intention was not a discourse on the whole subject, but rather on a part, a very important part, of the treatment of these accidents.

I cannot resist, however, availing myself of the opportunity to narrate *one* experience of mine, particularly as I much desire to know whether any of my professional brethren of this society have ever encountered anything at all like it. A good many years ago I was called to a woman at the end of the fourth month of pregnancy. She was flooding, had intermitting pains, in a word, was miscarrying. She was well advanced in life, considerably over 35 years of age, and this was her first pregnancy. As is not unusual in similar circumstances, the *os uteri* and *cervix* were rigid and undilatable and I had a tedious time of it, being three days in attendance before the entire ovum was removed. When my attendance ceased, I impressed upon her the importance, in case of a future pregnancy, of her notifying her physician as soon as she should be aware of being pregnant and being guided by him in view of the great possibility of her again miscarrying. In about six months I was notified that she was again pregnant, gave her such directions as I considered proper, and in due time I delivered her without instrumental or other artificial aid, of a full grown child, which cried lustily once or twice and seemed vigorous at birth. I tied the cord, detached the infant and laid it in a shawl in a corner of the bed, and, being particu-

larly anxious that my patient should not lose blood unduly, which she could ill afford, placed my left hand over the *fundus* and, finding the uterus well contracted and the placenta detached, removed the latter. While I was just completing this process, I noticed that the infant was very pale and still. It was dead. My first terrible apprehension was that there had been hæmorrhage from the *funis*, but on examination, I found that there had been none. The child had been lying with its face quite uncovered. I told the father that I could not *certainly* explain the cause of death, but that an *autopsy*, if he wonld consent to it, would probably reveal a defect of formation of heart, or, if not that, the cause whatever it might be. He would not consent. He told me that he was quite satisfied that the death was in no way from any fault of mine, and that he would be resigned to it as to an unavoidable misfortune. I attended the mother until my attendance was no longer necessary, met her from time to time, was occasionally called to see her or her husband, and was on the pleasantest terms with both, till, some year and a half after the birth of her ill-starred baby, I met her in the street, saluted her cordially and was "*cut dead.*" I immediately went to her sister-in-law, a very old and attached patient, and asked her what it meant. With a good deal of difficulty I gradually got at the whole story. My patient, who had given me the "cut direct," was led to believe that she was again pregnant, her *menses* not having appeared for over five months. She intended to have me attend her, and followed the directions I had before given her, but a very benevolent and busy neighbor instructed her as to the very superior abilities and "good luck" of a professional brother and urged her, in view of the "bad luck" she had with me, to call in the fortunate relative alluded to. This person called on her, and seeing a woman not far from forty, and being at that time very busily engaged in the study of and effort to obtain reputation in gynæcology, informed the patient that she had uterine disease, and asked her to call at his office. She did so, the next day, the doctor examined her *thoroughly;* you may judge how he examined her from the fact that he informed her that her uterus was very much enlarged, its cavity being over 4½, nearly 5 inches in depth. What he applied or prescribed I know not, nor is it ma-

terial. The woman went home; about midnight she was seized with intermitting pains and a sanguineous discharge. The *gynæcologist* was sent for, most devotedly remained with his patient for many hours, and did not leave her till he had removed *something*, something which the woman and her husband wished to see, but something which the doctor, good, kind, considerate soul, would not show them. It was "too horrible," "something which Dr. Martin had left in her uterus at the time she had miscarried, over two years before." Now, gentlemen, brethren, of the New York Medical Society, did any of you ever hear of such a case as this so kindly, considerately and disinterestedly explained to poor, simple, credulous folk, by a distinguished brother? Is anything more needful to convince you of the great, the imperative necessity of fully and carefully evacuating the uterus in cases of miscarriage? That a fragment of a fourth month *ovum* should not only have remained in the uterus through and after a pregnancy and parturition at full term, but after that for many consecutive menstrual periods, and in about two years have grown not only too horrible for human sight, but also as large as "a good-sized wash-bowl," is surely very wonderful. Such marvels probably do not happen outside of Roxbury. I sincerely hope that you may be warned by the solemnity of this occurrence and so its repetition in any other part of this highly favored district may be avoided.

Seriously, gentlemen of the society, did you ever hear of a piece of professional ignorance and villainy equal to this I have narrated? A man so ignorant of his profession as to fail to diagnosticate pregnancy in the fifth month, who introduces Simpson's sound, induces abortion, and then, knowing that if he acceded to the natural wish of his poor victim, to see the "tumor" he had so skillfully removed, that no amount of ignorance or credulity could possibly blind her or her husband to the real character of that supposed tumor, refuses to show it, because it is "too horrible," throws on another physician utter blame and odium by an infamous, cowardly, infernal lie; the only way to save himself from the disgrace and ruin he so richly deserved and may yet receive. If our much-lauded Massachusetts Medical Society meant anything—if it was really a means to the end of purifying

and elevating the profession of Massachusetts, and not merely a contemptible effete oligarchy, the main end of which is to glorify a *coterie* of mediocrities, and to enable a ring of political doctors to control the profession of the State to its lasting detriment; if it were a society whose chief end was to maintain a proper police and *esprit du corps* in the profession, and not a body of practitioners merely who assemble annually to hear a string of cut and dried and quite impromptu speeches of mutual laudation, listen to a throng of young gentlemen, just back from Vienna, tell them how well they learned their lessons there and see some magical operations done by some Boston gentlemen who are eager to throw all this annual "ground bait" in the fond hope that it may bring fat country cases and fees to their net [the hospital] and their hook [their private practice], this would have been a very proper case to have brought to its notice, but those who know that "venerable" society as I know it, are very well aware that such villainy would meet with but ineffectual and reluctant censure. I long debated, hateful as are such suits, whether it were not best to bring an action at law against this professional "brother," but at last concluded to let it pass, with much more like it, trusting and believing that there will be a final audit of all these things, in a court above human corruption, before a judge with whom perjury and even the influence of the "Boston clique" can avail naught; a court and judge, such as is not to be found even in that very high-minded and quite immaculate body, "The Counsellors of the Massachusetts Medical Society."

Article IV.

A Case of Unusually Late Chloroform Asphyxia. By F. C. Hotz, M.D. Reported to the Chicago Medical Society, May 5, 1879.

Serious accidents during chloroform anæsthesia usually occur while the anæsthetic is being administered or immediately after it has been discontinued. Only when a patient has been submitted to a prolonged narcosis, accidents attributable to the action

of chloroform have been known to happen sometime after its discontinuance.*

But it is very unusual that a serious accident occurs at this late period to a patient who has received a minimum dose of chloroform, just sufficient to produce a short narcosis for the performance of a short operation.

For this reason I believe the following case is remarkable and worthy of being recorded:

On the 24th of February, at 3 o'clock p. m., Thomas Jones, aged 8 years, came to the Illinois Charitable Eye and Ear Infirmary for the operation for convergent strabismus. His mother, who accompanied him, informed me that he had not eaten anything since breakfast. For at a previous visit I had told her that the boy should take no dinner on the day of the operation.

The patient, a very bright and healthy boy, was so glad to get rid of his disfigurement that he submitted without the least struggle to the administration of chloroform. His lungs and heart were normal in every respect. Chloroform was administered in an Allis' inhaler, and after about five minutes the boy was profoundly asleep. The apparatus was then removed and the operation proceeded with. The right internal rectus muscle was first tenotomized, and during this time pulse and respiration were perfectly regular. I put the speculum in the left eye, pinched up a fold of conjunctiva over the left internal rectus, and was just going to incise it with scissors when the boy began to hiccough just as though he was going to vomit. Thinking it was an effort at vomiting, I withdrew the instruments; but at the same instant the boy's face assumed a deep dusky color, respiration ceased and the pupil of the left eye, though fully exposed to the light by the speculum, suddenly became dilated and immovable.

The tongue had not fallen back upon the epiglottis; but it was pulled out nevertheless. The foot end of the table was elevated at once, while I induced artificial respiration by rhythmic compressions of chest and abdomen. After a few minutes the lividity of the face began to disappear, the pupil became movable and

* In the table of deaths from chloroform from 1869 to 1879, compiled by Dr. L. Turnbull, for the second edition of his work, "The Advantages and Accidents of Artificial Anæsthesia," I find that in only ten cases out to 160, death occurred *after* the anæsthesia.

contracted. When the patient began breathing and the foot end of the table was let down, the hiccoughing paroxysm returned, but was stopped by quickly elevating the board again. While the patient was still in this position I completed the second operation. Perhaps ten minutes later, the boy woke up and recovered without the least nausea.

Remarks.—In order to set this case in its proper light, I may state that the chloroform was kept in a cupboard with the door closed; that its purity was proven by the chemical tests; that the whole quantity gradually dropped upon the inhaler did not exceed thirty minims; that the apparatus was not applied again after I had commenced the operation; and that the patient lay perfectly horizontally during the narcosis. There was no organic lesion of the heart, no mechanical obstruction of the larynx; and since the boy did not vomit after the operation, I do not believe the asphyxia in this patient was due to food having been drawn up temporarily into the trachea by any effort at vomiting. I am rather inclined to believe that the asphyxia was due to the depressing and poisonous influence of the chloroform upon the nervous centers. The center of respiration became paralyzed, its regulatory influence upon the rhythmical movements of the muscles of respiration ceased, these movements became irregular and respiration spasmodic, hiccoughing. The defective respiration quickly loaded the blood with carbonic acid and thus produced a state of asphyxia which brought the patient to the verge of death.

In my own experience of fifteen years, this case is the first instance that a short and regular narcosis assumes a serious aspect at a time when the anæsthetic has been discontinued for a number of minutes and when we are accustomed to considering the patient safe and near his recovery. Dr. Laurence Turnbull, of Philadelphia, to whom I communicated this case, wrote to me that "the case of the boy was not so remarkable as to the time of the asphyxia; for on consulting my table of deaths from chloroform, which I had prepared for my second edition, I find there were ten deaths after operations, with chloroform poisoning mentioned as the cause." Still the case seems a little remarkable considering the small amount of the chloroform used and the briefness of its administration. For among the ten cases in Dr. Turnbull's

list, there are only three which would compare with mine as to the short duration of the narcosis; in one case, chloroform was given for extracting a tooth; in the second case, for introducing a catheter; and in the third case, for the operation for fissure of the anus. In the other seven cases the amount of chloroform was larger (from two to twelve drachms) and the narcosis of a long duration (as for instance for amputation of thigh, parturition).

Dr. Turnbull also has kindly given me the notes of a case which is very similar to mine, but terminated fatally. A young girl, perhaps thirteen years, was operated upon by Professor Jaeger, of Vienna, for some trifling defect in her eye. The operation lasted but a few minutes, and was done under chloroform. A bandage was applied and the patient put to bed, already partly conscious. A few minutes later defective breathing with deep blueness of the skin was noticed. Agents for restoring consciousness were in vain employed; finally a tracheotomy was performed, and artificial respiration carried on by means of a bellows through the canula, but with no effect. Post mortem revealed nothing satisfactory.

ARTICLE V.

ANTISEPTIC SURGERY. By G. B. PRATT, M.D., Elkhart, Ind., late Resident Physician of the King's County Hospital, Brooklyn.

It would be very interesting, and demonstrate in a very forcible manner the world-wide interest taken in the subject of this article, could a collection be made of all the papers, pamphlets and books bearing on this subject, which have been written and published during the past few years. What a mass of literature, speaking in every language both *pro* and *con*, showing the spirit of advancement and the desire for a more perfect system, for better results, which animate the surgeon of to-day! And it may be asked, what subject is of more importance or of greater interest to the surgeon and the general practitioner as well, than that of the management of wounds? Are not the well-being and life of his patients, as well as his own

reputation, often dependent upon the results of such treatment? It is not very remarkable, therefore, that any method which claims to diminish the mortality and expedite the cure of these cases, should receive a ready welcome from every member of the medical profession.

Every innovation in surgery, though possessed, perhaps, of some good qualities, is attended by a host of useless and oftentimes injurious properties, but practical experience, attended by the sharp criticisms of practical minds, tends ere long to separate the wheat from the chaff, and while this is left to the winds, that is gathered into our store-houses of knowledge and carefully treasured for the use of future generations, until in the light of a more advanced knowledge that which we pronounced good will be again refined.

But there are certain great principles in surgery which have ever been, and always will be, the sure guides to the surgeon in the management of wounds, and any measure which will aid us in carrying out the more perfectly these rules, will command our respect and commendation. The cardinal principles in the treatment of wounds to which I refer are these: coaptation, drainage, cleanliness and rest, and these in order to be effective must be perfect, each in its way. There must be perfect coaptation, perfect drainage, perfect cleanliness and perfect rest; if one of these indications be neglected, the others will be unable to supply the deficiency, and thus their efforts at repair will prove abortive. As to what extent the "antiseptic method" will aid us in fulfilling these indications, or how essential the different steps of the method really are, are questions which the ablest minds in our profession are discussing at the present time.

To Mr. Joseph Lister undoubtedly belongs the honor of having carefully developed this method and conscientiously followed its teachings to the most minute proceeding, but he deserves the condemnation passed upon him by the Clinical Society of London for not making his results known, he having published but a few cases, and these mainly to illustrate his method. A writer in the *New York Medical Journal* says, "it seems to me the name of Joseph Lister must outrank in medicine all of his century, not excepting the discoverer of anæsthesia."

There are several antiseptic methods, all of which differ in some respects from that of Lister. As all are aware, Lister insists upon the use of the carbolic acid spray continuously. Mr. Callender uses no spray, but having tied the bleeding vessels with carbolized catgut, he washes out the stump with a carbolic solution of 1 to 20, and secures drainage by two pieces of carbolized gutta-percha, closing the wound with silver sutures. Over this he places a few layers of carbolized lint, covered by a sheet of gutta-percha, next a thick layer of cotton-wool, and finally a bandage. Rest is secured by a stump splint, hinged to allow ready re-dressing. His results after capital operation have never been equaled.

Mr. Holmes has followed Lister in all the details excepting the spray only, and the results obtained in his practice, including treatment of compound fractures, have been quite remarkable. Mr. Gamgee prefers treating wounds by dry and infrequent dressings, rest and pressure. The edges of the wound are brought in perfect coaptation by silver sutures, a gauze and oakum pad placed over the wound and drainage secured by means of rubber tubing; cotton wool is then placed over all, and a splint applied in treating a limb and perfect rest secured. The dressings are not removed, unless demanded, until the ninth day. He reports excellent results. In these methods cited, primary union is aimed at, the same as by the Lister plan.

Dr. James R. Wood has made known the success which may attend the use of a method first introduced in the early part of this century by Kern, a Vienna surgeon. In this, which is called the open treatment, and the cotton wool dressing of Guérin, there is no attempt made at primary adhesion. Dr. Wood leaves the wound entirely open; perfect drainage is thus secured, and the parts are kept scrupulously clean by the frequent and free use of carbolic acid solution. He has published through his house-surgeon fourteen cases of amputation treated in this way without a single death.

M. Jules Guérin insists upon perfect occlusion with compression. He thoroughly washes the wound with carbolized water, packs in small masses of raw cotton, and, surrounding the stump with two or three layers of cotton wool, applies a linen band

tightly over all, then another layer of cotton, then another band, and so on until he has used several pounds of cotton wool. In a case in which he applied it, at St. Bartholomew's Hospital, London, he used up five pounds of cotton wool. He claims very flattering results from his dressing.

In Dr. Wood's method we follow two of the rules of surgery of which I have spoken, viz.: cleanliness and drainage; and rest may also be secured to a certain extent. Cases treated in this manner require a comparatively long time for healing, and are apt to become very tedious. This method illustrates what may be accomplished by meeting two of the indications perfectly, and would go to show that this spray was not absolutely indispensable to very good results under very bad circumstances. And when we remember that the ward in which his patients were treated had been vacated the previous year in consequence of puerperal fever, we will the better realize the disadvantages he had to contend with. Fourteen consecutive amputations and *no deaths*.

The question naturally arises in the mind of every surgeon, after reading such a report: Is the spray an essential factor to the most perfect result in the treatment of wounds? In other words, is the spray any benefit whatever, or is it simply a superfluous part of the Lister method, which may as well be dispensed with. If it is of no value, why burden ourselves with its use? In an editorial on this subject in a recent number of the *Medical Record* the writer says,* "There is a growing conviction that the spray can be dispensed with, and that a thorough washing of the cut surfaces with an antiseptic fluid will accomplish the same end. If we were called upon to decide what was the most important element in Mr. Lister's dressing, we should say that it was his system of drainage, and to this, more than anything else, must be attributed his success." Billroth says,† "Scrupulous cleanliness and very careful draining away of all the discharges from the wound are by far the most important factors in the success of this method."

Bearing on the same subject Dr. Gross writes,‡ "The treat-

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*The *Medical Record*, March 1st, 1879, page 208,

†Billroth's Surgery, vol. 1, page 142.

‡Gross' System of Surgery, vol. 1, page 371.

ment of open wounds, of whatever character, is often greatly expedited by the employment of protective measures, not too frequently changed. The much-vaunted carbolic acid treatment of Mr. Lister owes, I have no doubt, more of its efficacy to this circumstance than to any special virtue of the acid itself." But statistics, in a discussion of this character should, and do, have more weight than the unsupported opinions of the best surgeons. In the mortality table prepared by Dr. R. F. Weir,* the per cent. of deaths following amputation of the thigh, leg, arm and forearm was 2.27 under Callender's treatment (without the use of the spray), and after the method of Lister, reported by Volkmann, the per cent. was 3.09. The results attending Callender's management of wounds has never been equalled.

As an additional argument that the spray may be done away with, I would refer to the success of Mr. Lister himself, in his treatment of compound fractures; by simply washing out the wound with a carbolized solution he obtains as good results as by the use of the spray in operations. Besides the expense attending Lister's plan, those who have tried it will readily admit the great difficulty met with in trying to follow his directions exactly. There is sure to be some mishap during the operation, some instrument or some assistant's hands failed of being washed with the antiseptic solution, or the spray would be for an instant misdirected. Now as the germ theory constitutes the basis of Lister's antiseptic method, success in its practice can only be looked for with the aid of attention to minutiæ and details, and to extreme care in manipulation. One single cystic germ making its way to the surface of the wound would, in accordance with this theory, be sufficient to light up all the mischief which it is the object of this method to avert. Is it any wonder, then, that surgeons become discouraged, and question the necessity of a proceeding which is the occasion of so much annoyance, and which, though conducted with the utmost care, leaves very little hope that the effort has been successful?

I would not limit myself to a one-sided presentation of this question, being well aware there are many of the leading minds

* *New York Medical Journal*, January, 1878, page 51.

in our profession who strongly advocate Lister's system, in all its details, and who attribute their success to a faithful observance of the rules as laid down by him. In a letter from Berlin, in a recent number of the MEDICAL JOURNAL AND EXAMINER, the writer says of Langenbeck, "With the use of the antiseptic spray, he says that time has ceased to be an essential factor in the performance of most surgical operations."

Erichsen, after speaking of certain morbid conditions of the blood and constitutional derangements of the patient, says,* "It is undoubtedly these disturbing influences that prevent the complete success of Lister's method, in a certain number of cases. Theoretically, it is perfect, in practice its success is not constant."

A writer in the *London Lancet* remarks,† "The following cases may prove, I think, of interest to those already engaged in the practice of antiseptic surgery, or who may be (as I myself was for long) on the borderland of belief regarding the soundness of the doctrine on which it was based; a position from which I was ultimately driven by what I saw and heard during a long course of visits to Professor Lister's wards in the Edinburg Royal Infirmary."

I think, after all has been said and done, the homely adage (if I may be permitted to use it) that "every dog has his day," will be found to be just as true regarding Lister's antiseptic method as any new method for the treatment of disease, whether surgical or medical, which has ever been introduced, and that a modification of this plan will be fixed upon which will insure the closest observance of the four cardinal principles of the treatment of wounds. To this end the efforts of every surgeon should be directed. Let us strive to simplify rather than complicate surgical procedures, and it is a noteworthy fact that this is the tendency of the age; a healthy sign, and one which gives promise of grand results in the future.

ELKHART, Ind., April, 1879.

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* Erichsen's Surgery, vol. 1, page 174.

† Illustrations of Antiseptic Treatment in Minor Surgery. By J. C. O. Will, M.D. Am. Reprint October, 1878, page 443.

Clinical Reports.

ARTICLE VI.

CHICAGO HOSPITAL FOR WOMEN AND CHILDREN.

SERVICE OF DR. MARY H. THOMPSON. (Reported by L. Anna Ballard, M. D.)

The following cases of ovariotomy, taken from the records of the Chicago Hospital for Women and Children, present some points of interest, as these three successive cases terminated in perfect recovery, and illustrate the value of Lister's antiseptic method of operating.

Case I.—J. C. Aged 31. Single. Born in Scotland. Occupation, general housework.

She has generally been in good health, but has never been a strong woman. First menstruated at the age of 16. Never suffered unusual pain at menstrual periods. In May, 1877, she was kicked in the iliac region, which left a "soreness for several weeks."

In January, 1878, she first noticed a tumor in the right ovarian region just before a menstrual period, after which it enlarged rapidly. She suffered no inconvenience until July following, when sharp, stinging pains were felt in the left side. Menstruation occurred regularly up to the date of operation.

She consulted Dr. R. G. Bogue, who advised her to come to this hospital. Entered August 5, 1878. On examination by Drs. Bogue and Thompson, fluctuation was revealed by palpation. The enlargement of abdomen was symmetrical; depth of uterus over ten Ctm.; breathing oppressed. It was decided to perform paracentesis by means of trocar and canula inserted into the linea alba. Dr. Bogue drew from the cyst 8 litres of light brown fluid. This was done to confirm the diagnosis.

Aug. 15th. The patient was again examined by Dr. Bogue, who found the cyst filling with fluid, and advised her to leave the hospital until time for operation, which he thought would be in about two months.

Oct. 10th. She was readmitted. Abdomen full and tense. Breathing oppressed. Intense pain in the back, from which cause she had been for two weeks unable to sleep in a recumbent posture. Bowels inactive. Kidneys not secreting well.

She was put upon tonics and diuretics until the 19th, when Dr. Bogue, assisted by Dr. Thompson and others, removed a multilocular cyst weighing, with its contents, 15 kilog. There were adhesions all around the cyst. The cyst wall, though handled with due care, was so tender as to rupture, and let a large portion of the thick, tenacious fluid flow into the abdominal cavity, which was thoroughly sponged out with warm carbolized water; this process requiring several minutes.

The tumor was in the right broad ligament, involving ovary and Fallopian tube. A double ligature of white silk braid (carbolized) was applied to the pedicle very near the uterus, tied in two parts, and cut near the knots. The pedicle was then cut about one Ctm. from the ligature and dropped back into the abdomen. There was no hæmorrhage. Drainage tubes were inserted in the lower end of the incision, and the wound closed by four hare-lip pins, including the peritoneum in the sutures, and by five intermediate superficial silk sutures.

The operation was performed under the carbolized spray of 5 per cent. strength, sponges and instruments were kept well carbolized, and Lister's dressings were afterward applied.

The recovery was rapid and uninterrupted. On Nov. 14th the patient walked three miles. She has on several occasions since reported herself well.

Case II.—Mrs. M. F. C. Widow. Aged 50. Born in New York. Mother of five children. Menstruation began when the patient was about 14 years old, and recurred regularly to the time of the first pregnancy. For the past 24 years she has been subject to dysentery, having several attacks yearly. Sixteen years since was injured in a riot, the frontal bone being fractured. From this wound 9 small pieces of bone were removed. A few

months afterward she began having "fits," which continued for ten years.

She first noticed abdominal enlargement 7 years ago. It increased very slowly. She was treated in New York city for ascites. Three years since she was attacked by menorrhagia, which was followed by a sickness of which she can give little account. Once after this sickness she had an excessive menstrual flow, and since that time she has had complete prolapsus of the uterus.

She first entered this hospital Oct. 29th, 1877. Measured at umbillicus 108 Ctm. Depth of uterus 14 Ctm. Kidneys not secreting well. Was treated with tonics and diuretics without decrease of abdominal measurement.

Nov. 22d, 1877. Dr. Thompson called the hospital staff in consultation. The enlargement was diagnosticated to be, one or more ovarian cysts. Dr. Thompson aspirated the tumor, drawing away 12½ kilo. of a thick, foaming, brown fluid. The tonic and diuretic treatment was continued. During the winter and spring the patient was troubled with dysentery and various other temporary complaints.

January 25th, 1878. As respiration was becoming oppressed, and the patient could not make up her mind to submit to an operation, the tumor was again aspirated. The fluid which was taken away measured 12½ kilo., and was of a dark brown color.

August 26th, 1878. She left the hospital, intending to return in the fall for an operation.

November 19th, 1878. The patient returned. Her general health was good. Abdomen very large. Respiration not greatly disturbed.

December 4th, Dr. Mary H. Thompson, assisted by Drs. Byford, Bogue and others, removed a multilocular cyst weighing 1⅓ myrg. pounds and containing 13 kilo. of dark, ropy fluid. There were no adhesions about the superior portion, but at the base of the tumor the adhesions were extensive and strong. This cyst was taken from the left, broad ligament; the pedicle was ligated with a double, white silk carbolized braid which divided the pedicle into two parts, and was tied on opposite sides. The ligatures were then cut short, and the pedicle, cut about one

Ctm. from the ligatures, was dropped into the abdominal cavity. The right Fallopian tube and ovarian ligament were ligated, cut and dropped into the abdomnal cavity, in the same manner as the pedicle; as they were found firmly adherent by inflammation to the tumor, or rather the ovary was apparently absorbed, as it was not found. The incision was closed by five silver wire sutures including the peritoneum, and three superficial sutures of carbolized silk. The sutures were removed on the tenth day, and the whole abdomen covered with resin adhesive plaster in such manner as to keep the wound united and support the abdominal walls.

This operation was also conducted according to Lister' antiseptic method.

The wound healed by first intention, and the recovery of the patient progressed with almost no disturbance of the system.

Case III. Miss H. F., a teacher, aged 24, born in Canada of Scotch parents, was admitted into the Hospital for Women and Children Jan. 28. 1879.

Health always good. Menstruation began at age of fifteen; never painful, and always flowed freely three or four days.

Came to the West about eighteen months ago. Gradually "increased in flesh" after leaving Canada. First noticed abdominal enlargement July, 1878. In August, her stomach became so irritable that she could eat almost nothing until the past month. Menses, scanty and painful in September, 1878, ceased entirely in November. The enlargement increased rapidly after the menses ceased. During the last period (in which she should have menstruated) before the operation, which occurred just after her entering the hospital, her size increased, so rapidly as to be noticed by every one who saw her daily, and considerable œdema of the feet came on.

During the summer the urine was dark and contained a pink sediment. A few weeks ago it had a "milky look." At present it is free, with sediment of urates and phosphates.

During the past month her health has been good, except a pain over the left portion of her abdomen and across the lower part of her back.

On examination by Dr. Thompson the fundus of the uterus

was found pressed forward between the pubes and the tumor, posteriorly. Fluctuation was detected in the abdomen. Measurement, 97 Ctm. at the umbilicus.

On Feb. 5, at 2.15 p. m., the patient was anæsthetized by Dr. Bottsford, with the intention of concluding the diagnosis by aspiration, but on examination by Drs. Bogue and Thompson the case seemed so clearly one of ovarian tumor, that it was decided to proceed in the usual manner for the removal of the tumor. Physicians present were Drs. Thompson, Bogue, Bartlett, Groesbeck, Bottsford, Gaston, Barlow and Ballard; besides Miss Akers and others.

Dr. Thompson, assisted by Drs. Bogue, Bartlett and Gaston, performed the operation under the carbolized spray. An incision was made in the median line, which extended from about 2 Ctm. below the umbilicus downward about 10 Ctm. When the sac was reached, Spencer Wells' trocar, with tubing attached, was thrust into it. The operator then tried to introduce her hand to break up the adhesions; but finding the incision too small to work to advantage, enlarged it about 1½ Ctm. Adhesions were then found over the superior portion of the tumor, which were severed; and the sac was then removed from the abdominal cavity. The pedicle was pierced near the uterus by a large needle armed with a double silk braid (carbolized), and the ligatures tied upon opposite sides, dividing it into two parts. The pedicle was then cut, leaving a short stump of about 1 Ctm. in length, and dropped back into the abdominal cavity. On examination of the right ovary, it was found to contain one or more cysts, and was removed with the outer portion of the Fallopian tube. The hæmorrhage was quite free, but no vessels were ligated. The cavity was carefully sponged out to cleanse it of the blood which had poured into it. Evidence of considerable inflammation existed in the thickened, rough and dark red peritoneum.

The incision was closed with one superficial and eight deep sutures, all of silver wire; but in twisting the wires, the second and third from the lower end of the wound broke, and superficial wire sutures were put in their places.*

*This wire was supposed to have been affected by lying in carbolized water for an hour at a time at several different times.

Lister's dressings and flannel bandage were applied, and the patient put to bed at 3:30, P. M. Pulse 108.

Fluid from the cyst measured 14 litres, and weighed 15 kilo. The cyst weighed 2 kilo.

At 5:30, P. M., when the patient awoke from the effects of the anæsthetic, she was given 0.15 of quinine and 0.02 of morphia. 7 P. M., pulse 120; 9 P. M., pulse 132, temp. 39°.

Sixth, 5 A. M. Vomited; could only tolerate milk diet; 3 P. M. vomited again. Pulse, 116.

Seventh. Nausea continued until this morning, and could take no food.

Eighth, 7 A. M. Temp. dropped to 37.3°; pulse, 88.

Ninth, 8 P. M. Temp. 38.4°; pulse, 102. Both gradually dropped to the *normal standard* in the early part of the succeeding day.

Tenth. Removed five sutures.

Eleventh. The remaining sutures were removed and adhesive straps applied.

Fourteenth. Patient removed to another bed. In two weeks from the time of the operation she was apparently well, but weak; at this date reports herself well.

In the last two cases there was not even a drop of pus in or about the incisions or sutures. It was Dr. Thompson's opinion that the nausea and vomiting in the last case were caused by the morphine, which was changed to tr. opii then to tr. opii et camph.

NOTES FROM PRIVATE PRACTICE.

ARTICLE VII.

CASE OF GANGRENE OF THE LEG, FROM PHLEGMASIA DOLENS; AMPUTATION; RECOVERY—ALSO, A CASE OF TRACHEOTOMY FOR TUMOR AT THE GLOTTIS; RECOVERY. Reported to the Chicago Medical Society, April 21st, 1879.

I. *Phlegmasia Dolens.*

Mrs. J. married, aged twenty-four years, healthy, delivered Feb. 18th, 1878; first child; labor natural and not severe nor prolonged; remained very comfortable with apprarently nothing

out of the way until the 23d, when severe pain began in the calf of the left leg, which steadily increased in severity until it became terrific, necessitating large doses of opiates to give relief, even to the extent of a grain of morphine hypodermically at a time. The leg was swollen but little, and only moderately tender. The pain continued in its severity, without much change in the limb, except moderate swelling and some tenderness behind the knee, until the morning of the 2d of March, when there was noticed a dark colored spot on the ball of the foot and upon the side of the great toe. The severe pain continued and the discoloration and coldness and loss of sensation rapidly extended, so that on the afternoon of the 5th of March the limb was thoroughly in gangrene, from the middle of the leg downward, the whole member but little swollen; the foot a little shrunken. There was tenderness behind the knee and along the course of the femoral vessels, the latter very slight; pulsation of the femoral, just below Poupart's ligament, was quite feeble; the heart beat about eighty times per minute, and intermittent; the long saphena vein was neither distended nor tender.

At this date, the 5th, I first saw the case, with Dr. Hessert, who was in attendance on the case and had been since the evening of the 2d. There was very little or no odor from the limb. It was well wrapped in flannel, wet with a solution of alcohol, covered by rubber cloth, and surrounded by bags of hot bran or hot sand. There was given 0.25 of salicin four times a day, and opium sufficient to relieve the pain. She was encouraged to take milk, soup, coffee, eggs and any other food she desired, and a moderate amount of stimulant. By the 7th the gangrene had extended to within about five inches of the knee, the leg above the gangrene somewhat inflamed, the thigh swollen and a red tender line along the track of the lymphatics. There was rather less pain, or it was not so severe continuously, yet there were spells of severe pain. The patient was eating fairly, but felt a good deal depressed. There had been not more than the usual amount of lochia; it had been offensive, but had now ceased. She had at no time complained of pain, or discomfort even, in the lower part of the abdomen or pelvis. The patient continued in about this condition, really not losing ground and the gan-

grene not extending, suffering less pain, pulse becoming steady and ranging from one hundred and twelve to one hundred and twenty per minute, up to the 14th, when there was less inflammation of the thigh and upper portion of the leg, with a line of demarcation beginning to form; there was a good deal of odor now from the limb. Amputation was now advised as soon as the line of demarcation should be fairly established.

On the morning of the 16th, with the assistance of Drs. Hessert, Hooper, Bert and Hann, I amputated the limb at the knee joint. There was not room to make a stump below this point and further I believed disarticulation a safer operation than amputation either just below or just above the joint. The thigh was quite œdematous, but soft. The soft parts at the point of operation, were quite firm, from infiltration with sero-plastic effusion. Lateral flaps, according to Stephen Smith's plan, were made, brought together and secured by three or four sutures in the anterior two-thirds, the posterior portion being left open so as to secure free drainage. The thigh was supported by a many-tailed bandage, and the stump dressed with carbolated water, and rested upon a small pillow, which was afterward changed to an air pillow. The flaps were composed of skin and subcutaneous connective tissue, the straight part of the incision posteriorly extending upward to a point squarely behind the joint, the soft tissues in the popliteal space were divided at about the middle of the space, leaving barely the upper parts of the heads of the gastrocnemius.

At the point of division of the popliteal vessels the artery was patulous, but small; it was unobstructed as far downward as examined, which was beyond where it breaks up; it must have been unobstructed upward, for it throbbed after ligation as any large artery is wont to do in the end of a stump. But the two popliteal veins—there were two—and also all of the deep veins, were filled with firm clot, the subcutaneous ones being free. All of the veins in the popliteal space were plugged. In other words the whole system of deep veins of the leg was filled with thrombi, while the superficial one was not. How far upward there was thrombus of the deep veins of the thigh cannot be said, but certainly not above where the internal saphena joins, for this

was unobstructed. The patient recovered from the operation and progressed slowly to recovery. There was some burrowing of pus in the lower part of the thigh, which necessitated opening for drainage and cleansing. About two weeks after the operation there came on a phlegmasia dolens of the other limb; it was mild and gave but little pain, yet there was tenderness and hardness along the track of the femoral vessels. It served to pretty thoroughly frighten the patient and friends.

The diagnosis at first was gangrene from embolism of the femoral artery. As the gangrene occurred rather suddenly, no pulsation was to be felt in the leg nor popliteal region, and but feebly in the common and first portions of the superficial femoral and the saphenous vein was not obstructed; but it proved to be a case of gangrene from extensive occlusion of the veins; from that demonstrated condition of the veins, phlegmasia dolens implicating in this case the deep ones, leaving the superficial ones comparatively free. I judge that this result of the affection must be very rare, for I have found only bare mention made of it by Dr. Fordyce Barker, in his book on The Puerperal Diseases, saying that he had never seen a case, but that cases had been reported.

It would seem that gangrene occurred in this case as a consequence of the sudden obliteration of a large portion of the veins of the limb, thereby depriving the limb of sufficient capillary circulation to sustain it. And as there was not adequate means of returning the usual amount of blood from the limb, there was only a moderate amount sent to it, as shown by the feeble pulsation of the common femoral of that side as compared with the other.

2. *Tumor of Glottis*; *Tracheotomy.*

Willie Young, aged about 10 years; in July, 1875, began to cough, as of ordinary cold, which persisted with some expectoration of mucus. Cough became more and more troublesome and harsh; the breathing became noisy and at times a little difficult, especially when sleeping. He gradually lost flesh and steadily these evidences of interference with respiration referable to the larynx, became more pronounced.

In November when I saw him, respiration was performed with

some effort, becoming more difficult, when sleeping. Patient was emaciated, coughed and expectorated a good deal. Dr. H. A. Johnson saw him, and upon laryngoscopic examination there was found to be general chronic inflammation of the lower part of the pharynx, ulceration of the top of the epiglottis, and in the left aryteno-epiglottic fold a small tumor which folded that side of the epiglottis downward and toward the middle line, itself falling upon the glottic opening. The tumor, and general inflammatory swelling of the glottis encroached upon the opening so much that respiration was difficult, and especially so when the laryngeal muscles were off their guard during sleep or when there was spasm of the larynx, as occasionally happened. It was decided to apply to the parts by means of the hand atomizer a 4 per cent. solution of sulphate of zinc every second or third day, using once or twice a day a gargle of alum. Quinine was given, 0.15 morning and evening, and the taking of nourishing food was encouraged. All of this was to be tried, being ready to perform tracheotomy at any time in case of emergency. Instead of improvement, the respiration became more and more difficult, so that it was deemed best to resort to the operation, not waiting for emergency.

On January 2d, 1876, with the assistance of Drs. Johnson and John Bartlett, I operated; gave ether; opened the trachea and introduced a tube, after which he breathed perfectly easy, and slept quietly. There was a good deal of discharge of mucus through the tube from the bronchitis. The quinine was continued and the sulphate of zinc applied every other day to the parts by means of a pharyngeal or post-nasal syringe. The boy began to sleep well, eat well, breathe without any difficulty and regain his flesh. The general inflammation of the pharynx subsided, ulcer of the epiglottis healed, but the tumor remained red and about the same in size for a long time. In May he had an attack of whooping cough, for which I gave him pretty large doses of bromide of potassium and laurel water, which was continued for a couple of weeks or more. In the meantime the tumor had sensibly diminished in size. Iodide of potassium was combined with the bromide and given for about two months; the tumor gradually became smaller and the surface light-colored. From

the disappearance of most of the tumor and all of the inflammatory thickening, the opening to the larynx became quite free, and the boy could breathe very easily with the inner tube removed and the outer one plugged. In this way he respired through the larynx most of the day and through the tube at night. About the middle of October I removed the tube. At this time there was no obstruction, the tumor had shrunken away to a small nodule; the ulcer had healed, leaving some deformity of the epiglottis, the boy in good health, but had partial loss of voice. The opening in the neck closed within a few day after removal of the tube. He has had no return of laryngeal difficulty nor has he regained his voice.

Now, at the end of three years from the time of the operation the boy is well, having only a little harshness of respiration and able to speak in a tone about one-half between a good whisper and full voice. As to the nature of the tumor, I can give no decided opinion; its disappearance under the use of potassium would suggest a specific cause. Ulceration in that locality, probably implicating somewhat the vocal cords, although at no time was ulcer of them seen, would be suspicious. There are not apparent evidences of hereditary specific disease.

R. G. BOGUE, M.D.

CHICAGO.

IN THE GLASGOW DISPENSARY FOR SKIN DISEASES, a page in brilliant costume directs the patients to the several apartments, and a gentleman connected with one of the fashionable pharmacies of the city, dispenses the medicines ordered, which are supposed to be paid for. Will the Central Free Dispensary of Chicago suffer itself to be outdone by any such bloated institution in the "effete monarchies of Europe?"

WE are under obligations to Dr. Geo. H. Cushing, one of the Publication Committee of the American Dental Association, for plate and copy of the original and interesting report on Histology and Microscopy, by Dr. G. F. Waters, published in another column.

Society Reports.

ARTICLE VIII.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY. Seventh Meeting, April 25th, 1879. H. P. Merriman, M.D., in the chair.

Dr. DeLaskie Miller read a paper on "The Management of the Third Stage of Labor," published in the present number of the JOURNAL AND EXAMINER.

DR. ETHERIDGE thought that the so-called milk fever was probably not due to mammary congestion, but to the absorption of septic matter through the abrasions about the parturient canal.

DR. ROLER was in perfect accord with the views expressed by the reader of the paper. There should be no haste in the effort to secure contraction; this once attained, secured the woman against hæmorrhage. He never uses ergot during the second stage of labor, and in the third stage only when the placenta was in the act of being detached, or when inertia was present. Hæmorrhage had occurred very infrequently in his practice.

Concerning the use of disinfecting injections, the speaker found the practice objectionable, during the first twelve hours. Fresh wounds are capable of absorbing septic matter. After a time, wounds become glazed over and non-absorbing. There is danger of freshening these surfaces by the use of injections.

DR. DUDLEY thought it justifiable practice to inject the uterus itself with hot water in every case. It removed clots and tended to diminish after-pains. Hot water is especially useful in post partum hæmorrhage. On the other hand, he considered the use of Munsell's salt injudicious, and iodine much preferable, as being as efficient as a hæmostatic and safer. He mentioned an

epidemic of puerperal fever occurring in Bellevue Hospital, when Dr. Perry demonstrated the great usefulness of injecting the uterus with hot carbolized water when there was a tendency to hæmorrhage, and a warm, carbolic injection repeated every four hours subsequently, to protect the canal from absorption of septic matter. The temperature was always greatly reduced by these injections.

Dr. FITCH thought that milk fever was due to mammary congestion, and that a free evacuation of the bowels was a neglected but excellent remedy. In the management of the third stage of labor, he exercised pressure freely, in a direction upward rather than downward, upon the body of the uterus. He also agitated the uterus to stimulate it to contraction; he also made traction upon the cord, in the proper axis, for the same purpose. He usually inquired into the history of the previous labor of the patient, and governed himself accordingly. After labor he believed rest essential, and did not allow the clothing to be disturbed. He rarely introduced his hand into the uterus, and had never seen a case of so-called adherent placenta. He did not wash out the uterus or vagina, and had once known severe shock, fever and metritis to follow such injections.

Dr. SAWYER alluded to the importance of what might be termed the fourth stage of labor, and spoke of Dewee's success in protecting the woman from after-pains by allowing the uterus to rest after delivery.

The speaker believed that the almost inevitable clot might be prevented by allowing the uterus time to recover itself after delivery; by this means, the final tonic contraction occurs earlier and more strongly. After the lapse of 48 hours, he used vaginal irrigations of chlorinated soda.

Dr. NELSON never left the uterus till the placenta was expelled, and made frequent examination for an hour after labor. He did not meddle unless dealing with a dilated womb or hæmorrhage; then he introduced the hand and made compression. He gave ergot in abnormal cases, combining its use with quinine for some hours, or even days. He had known this course to prevent after-pains.

Dr. JONES thought the views expressed were clear, succinct

and eminently proper for the guidance of the accoucheur. He believed the normal state of the uterus just evacuated to be one of a more or less tonic contraction, which, by becoming complete, closed up the uterine sinuses. His plan of management of the third stage was influenced by the view. He never removed his hand from the uterine globe after the child was detached until the contraction was secured and became lasting. If the uterus was not plainly felt, he kneaded the organ until reaction was established, thus using pressure or agitation only when the organ was delinquent. In this manner he kept aware of the condition for at least an hour. He never gave ergot till after the birth of the child, and then with circumspection.

DR. MILLER concluded the discussion by enlarging upon the views expressed in the paper.

ARTICLE IX.

THE BRAINARD DISTRICT MEDICAL SOCIETY.

The Brainard District Medical Society met April 24. Present: Drs. J. W. Newcomer, H. B. Brown, M. Hurst, S. T. Hurst, J. D. Whitley, W. S. Watson, Chas. B. Maclay, A. I. Maclay, P. L. Dieffenbacher, W. P. Walker, I. N. Ellsberry, J. P. Walker, O. P. Crane, J. A. Walker, J. W. Spear and A. M. Bird.

The following new members were elected: Drs. Chas. B. Maclay and A. I. Maclay, of Delavan; Dr. J. W. Downey, of Topeka; and Dr. W. P. Walker, of Walker's Grove.

Officers elected for the ensuing year as follows: President, Dr. J. W. Newcomer; Vice Presidents, Drs. J. D. Whitley, I. N. Ellsberry and H. B. Brown; Secretary, Dr. J. A. Walker; Treasurer, Dr. A. M. Bird.

The retiring President, Dr. J. P. Walker, read his valedictory address, on the advancement made by the profession within the quartery century—after which the subject of puerperal fever was fully discussed, several valuable papers being read.

The President appointed as delegates to the State Medical

Society, to meet May 20, at Lincoln, Drs. H. B. Brown, W. S. Watson, J. A. Walker A. M. Bird, C. B. Maclay, S. T. Hurst and W. P. Walker; and as alternates, Drs. J. P. Walker, O. P. Crane, J. W. Spear, A. I. Maclay, I. N. Ellsberry, C. E. Elliot and G. H. Sanford. And as delegates to the American Medical Association, to meet at Atlanta, Ga., May 6, Drs. M. Hurst, L. L. Leeds and J. D. Whitley.

Adjourned to meet in Petersburg, July 24, 1879.

J. A. WALKER, *Secretary.*

ARTICLE X.

STATE MICROSCOPICAL SOCIETY.

At the annual meeting of the State Microscopical Society, held at the Academy of Sciences, 263 Wabash Av., April 25th, the following officers were elected for the coming year:

President, H. A. Johnson, M.D.; Vice President, Prof. H. H. Babcock; Vice President, Lester Curtis, M.D.; Treasurer, W. H. Summers; Recording Secretary, Ernest Stuart; Corresponding Secretary, Wm. T. Belfield, M.D.; Trustees, H. W. Fuller, Prof. E. S. Bastin, Jas. Colgrove, B. W. Thomas and H. F. Atwood.

The following is an abstract of a paper on "Tactile Hairs" read before the State Microscopical Society:

THE TACTILE HAIRS COMMONLY CALLED WHISKERS, OF CERTAIN ANIMALS.

By DR. LESTER CURTIS, of Chicago.

The growth of an ordinary hair takes place by the multiplication of the cells which surround the papilla and the follicle possesses no muscles of volition or special arrangement of nerve fibers.

The first noticable peculiarity of the tactile hair, as in the snout of a mouse, is the great size of the follicle, several times that of an ordinary hair follicle; this follicle has a bulging about

one-third of the distance from the top which corresponds with a remarkable enlargement within.

Two-thirds of the lower portion of the follicle is surrounded by striated muscular fibers which appear to arise from the side of the follicle by a short tendon. They encircle the follicle and then pass off to a considerable distance to become lost in the muscular fibers of the lip. These muscles are furnished with a rich plexus of unusually large capillaries. Other muscles are attached to the hair in a manner somewhat similar to the ordinary erectors of the hair, but are more abundant and of the striated variety.

Within the follicle and outside the root sheath of the hair is close plexus of very fine capillaries which send branches over the enlargement mentioned above and form a peculiar ring-like plexus above it. Between the branches of this ring-like plexus there is but little tissue; but in the mouse and cat, at least, it does not form a sinus as is claimed by some.

The enlargement surrounds the hair eccentrically and consists of two parts, the outer of which when the follicle is divided longitudinally through the center of the hair, is nearly circular in outline and is attached to the inner part by a short, thick pedicle. It is interspersed with oblong nuclei. The inner part is not so wide but is longer and surrounds the root-sheath like a band.

The speaker considered these last organs to be of a nature similar to the terminal organs of nerves found in other portions of the body but was not prepared at present to demonstrate his position.

The paper closed with a brief biblography of the subject, after which numerous slides were shown in illustration of his descriptions of these organs.

ARTICLE XI.

MICHIGAN STATE BOARD OF HEALTH. The regular meeting of the State Board of Health was held in Lansing, on Tuesday, April 8, 1879. The following members were present: Dr. R. C. Kedzie, Hon. LeRoy Parker, Rev. D. C. Jacobes, Dr. H. O. Hitchcock, and Secretary Henry B. Baker.

President Kedzie stated that on account of ill health and busi-

ness connected with oil matters, he had been unable to prepare his annual address. By a vote of the board, he was requested, if convenient, to make his annual address on the subject of the history of legislation relative to illuminating oils in the State of Michigan. The motion also included a request to have in condensed form the main facts bearing upon the dangers in the use of kerosene oil.

Dr. Kedzie was unanimously re-elected president of the board for the ensuing two years.

SLAUGHTER-HOUSES.

Dr. Kedzie presented the subject of slaughter-houses in towns and rural districts, and read a letter from F. Andrews of Dowagiac, relative to slaughter-houses in his vicinity. Dr. Kedzie referred to the rules which he had prepared for the government of slaughter-houses in the township of Lansing, and suggested the desirability of butchers uniting in one house in cities of even the size of Lansing, for greater ease of methods, for cleanliness and sanitary arrangement. Referred to a committee for investigation and report. This committee is also expected to prepare a model set of rules for the regulation of slaughter-houses.

DEATH OF REV. MR. BRIGHAM.

The secretary announced the death of Rev. C. H. Brigham, a former member of the board, and proper resolutions of respect to his memory were passed.

NEW LEGISLATION.

The secretary also announced the passage by the present legislature of three new laws, which will tend to promote the public health in this State and increase the efficiency of local boards of health. Of these laws, one provides that the council of each city and village shall be a board of health, unless there is other provision by special law; so that hereafter there is to be a local board of health in every township, village and city in the State; one law makes it the duty of health officers of cities and villages to notify the prosecuting attorney of any neglect by householders or physicians to report cases of disease dangerous to the public

health; and one authorizes boards of health in cities, villages and townships to furnish free vaccination to the inhabitants thereof. The secretary is to prepare a circular to health officers in cities, townships and villages, calling attention to some of their duties under the new laws, and otherwise setting forth their duties as health officers.

The board adopted a resolution tendering a hearty vote of thanks to Congressman McGowan for his labors in procuring the passage of the bill which has recently become a law, establishing a national board of health.

COMMUNICATIONS WERE RECEIVED

from Hon. C. D. Randall, of Coldwater, suggesting the propriety of the selection of healthy locations and the determining of plans and specifications for all new State institutions, by the board of health, and that all systems of drainage, sewerage, etc., in public buildings hereafter to be erected, should be approved by the State Board of Health previous to their adoption.

Also, from J. A. Russell, M.D., of Edinburgh, Scotland, setting forth a plan for a mutual sanitary protective association for cities, accompanied with a leaflet, giving the plan adopted in that city.

Also, from the national educational bureau at Washington, inclosing a communication from Wm. M. Evarts, Secretary of State, giving notice of a prize of £100 offered by the Royal College of Physicians of London for the best essay on hydrophobia, its nature, prevention and treatment.

Also, a communication from B. B. Ross, of East Saginaw, suggesting that health officers ought to visit all cases reported as dangerous to the public health and verify the diagnosis of the attending physician. He thought this would improve the accuracy of the weekly reports of diseases by health officers. The communication was referred to the committee on legislation, as was also a suggestion by Dr. Baker that the health officer should be authorized to act promptly for the restriction of such diseases, if found to be correctly reported. Another communication, on the same subject, received from E. S. Richardson, M.D., was referred to the same committee.

At the afternoon session Dr. Lyster was present, and presented

an article, portions of which he read, relative to the reclamation of

OVERFLOWED OR SATURATED LANDS.

Reference was made to large tracts of land on the Crapo farm, the Chandler farm, and near Detroit, and descriptions given of the methods adopted and their results. It also included a record of experiments made for the past twenty years in a large tract of country near Bordeaux, France, translated from a French report. This paper showed the great importance of the work, both pecuniarily and as directly related to health. The original French paper was illustrated with a diagram, showing the relations of the birth-rate to the death-rate as connected with this process of reclamation. It showed an increase of the birth-rate over the mortality until the Franco-Prussian war.

In the discussion which followed, Dr. Kedzie referred to a paper by Judge Albert Miller, of Bay City, on the same subject, giving his experience in the Saginaw valley, where he is reclaiming a section of very valuable land by protecting it with dykes, pumping the water out with steam pumps, and then keeping down the leakage by means of wind-mills. He received the thanks of the board for his paper, and was requested to extend his investigations far enough to include the inspection of overflowed lands in Gratiot county and some other portions of the State, and report upon them, together with recommendations as to what ought to be done.

Dr. Lyster also reported having prepared by request of the board the draft of a plan for a circular on the subject of

HOUSE-DRAINS AND PUBLIC SEWERS.

The circular is to be studied and elaborated by each member of the board before it is printed and sent out.

Dr. Kedzie said he wished to give an additional point to be considered in testing tin utensils for the presence of lead. His method heretofore published, as thus modified, would be to moisten the tin with nitric acid over a space the size of a dime, dry thoroughly, place thereon a drop of water and then a drop of iodide of potassium. If the tin is adulterated with lead, the spot will assume a yellow color.

In reply to a question as to the

DEATH RATE IN THIS STATE,

whether increasing or decreasing under the enlarged sanitary work done in the past, Dr. Baker said it was difficult to speak as regards the whole State, but he brought forward a statement received from Dr. W. H. Rouse, a correspondent in Detroit, giving the total interments in that city since 1873, whereby it appears that while the number of inhabitants has been constantly increasing, the number of interments has been constantly decreasing. The figures given were as follows: Interments in 1873, 2,506; in 1874, 2,386; in 1875, 2,321; in 1876, 2,317; in 1877, 2,105; in 1878, 1,909. He gives for the years 1876–7–8 the number of deaths from each cause, whereby it appears that the decrease has been in certain preventable diseases, rather tending to show that the sanitary work at Detroit in perfecting the water supply and otherwise has resulted in lessening the death rate. In one instance it is almost certain that the lessening of deaths has come from vaccination. In 1877 there were 107 deaths from small pox, and vigorous efforts were made for a thorough vaccination throughout the city. In 1878 not a single death was reported from this cause.

NEW LEGISLATION.

Hon. LeRoy Parker, from the committee on legislation, reported having prepared various bills which had been brought before the legislature, three of which had become laws. One relative to an improved system of holding coroners' inquests, and another in which he had acted with the secretary of the board, in reference to an improved method of collecting vital statistics, is now before the legislature. The memorial for

A SANITARY SURVEY

Had been delayed, owing to lack of time and difficulty of getting the matter properly before the legislature. Mr. Parker and Dr. Baker recommended that the details of a plan be worked out in the board before presenting it two years hence for legislative action; and that there be a committee on sanitary survey, charged

with the preparation of schedules for such survey, to which committee all papers or suggestions relating to the subject shall be referred. A committee of three was appointed.

This was the meeting for the reorganization of committees; but as there are vacancies in the board the subject was postponed until the July meeting, A large portion of the work of the board is assigned to committees, and as communications come to the secretary they are forwarded to the proper committees for action. During the quarter, communications had been received and referred to committees, as follows: To Homer O. Hitchcock, M.D., 1, a postal from W. W. Switzer, M.D., relative to three cases of typhoid fever caused by use of bad water; 2, a letter from J. P. Gray, relative to sawdust and mill refuse in streams; 3, a letter from J. D. Johnson, sending a petition against allowing sawdust, etc., to flow into the lake; 4, a letter from C. W. Marvin, M.D., being a study of an outbreak of diphtheria in Gratiot county. To Henry F. Lyster, M.D., 1, a letter from Josiah Miller, relative to flooding Chippewa river for driving logs; 2, a letter from Daniel F. Swain, of Hungerford, relative to cutting away a dam; 3, a letter from W. F. Jenison, of Eagle, relative to drainage, etc.; 4, a letter from J. VanZandt, relative to the dam on Lincoln's Lake.

The secretary, having made some experiments and had some correspondence on the subject of illuminating oils, was requested to turn over to Dr. Kedzie, if he desired it, all correspondence in relation to that subject.

EXAMINATIONS IN SANITARY SCIENCE.

Dr. Lyster made a report on the proposition, originally made by him, that the board shall offer to examine candidates in sanitary science and its different branches, recommending that the board make preparations for examinations by its different committees on subjects assigned to them, and that certificates be given to those who ask for and sustain examinations. It was thought that the publication of the examination papers would tend to increase the interest and knowledge concerning the subject among the people generally; and that the examinations would tend to secure throughout the State a class of physicians especially intel-

ligent on the subject of sanitary science, and the public could have proof of their qualifications by means of these certificates. If the people see fit to select such persons for health officers, it would react well on the interest of public health, which it is the duty of the board to promote.

Dr. Baker favored it, and suggested that schedules of questions in each of the several branches of sanitary science be prepared for this purpose. The secretary was directed to procure copies of the examination papers in sanitary science from different colleges in foreign countries.

SANITARY CONVENTIONS.

A communication was received from Dr. Peters, of Tecumseh, inviting the board to hold a convention at that place. The board voted to hold two public sanitary conventions next winter, and each member pledged himself to make them a success. It is desired to procure at these meetings the greatest collection of sanitary utensils which can be obtained, from a common pie-dish to the most elaborate apparatus for heating and ventilation. The time and place for holding such conventions will be announced as soon as determined; and it is hoped that dealers in sanitary appliances will exhibit their wares, and describe their uses and advantages.

Drs. Hitchcock, Lyster and Baker were appointed a committee to prepare for the details of these sanitary conventions.

The secretary presented a report of work done in the office during the quarter. It included the distribution of over 1,000 copies of the Sixth Annual Report, the printing, addressing and mailing of about 2,500 blanks for return of annual reports of health officers and clerks of local boards of health, a large number of which had been received, examined and filed. Circular 29, relative to diseases in Michigan in 1878, had been sent to each correspondent, and replies from 26 persons had been received, examined and filed. Meteorological observations had been taken at the office during the quarter. Meteorological registers and reports of diseases had been received from observers, to whom also the regular distribution of blanks had been made. Work had been done in compiling the weekly reports of diseases, and

the meteorological data, for 1878. The correspondence and routine work of the office had been fully up to the average.

The subject of

ANNUAL REPORTS OF HEALTH OFFICERS

and clerks of local boards of health was discussed. It is found difficult to compile these reports in a satisfactory manner by counties, because in many cases one or more townships are not represented by reports. Some officers fail to report, because no reports are made to them; though one effort of the State board is to learn just such facts as the probable extent of delinquencies in the reports of physicians and householders.

The next regular meeting of the board will be held July 8.

NERVE STRETCHING.—(*Journ. de Méd.*, Jan., 1879, p. 41.)—Blum practiced this operation in a case of paralysis of the median and radial. A man who a month before had received a cut on the fore-arm, entered the hospital with weakness of arm and pain. Blum exposed the median and radial nerves, elevated them slightly. The next day the muscles began to contract, and the derangements of sensibility had partly disappeared; soon after the patient was completely cured. Duplay reported another case where the troubles of motility and sensibility were due to a tumor situated along the course of the cubital nerve. The diagnosis was neuroma of this nerve, but when operated upon, the tumor was found to be on the tendon of the anterior cubital muscle, and only acted on the nerve by the irritation of its vicinity. The nerve was stretched slightly. The movements returned very rapidly.

THERE will be a meeting of the Illinois State Board of Health, for the transaction of public business, and examination of candidates under the Medical Practice Act, at the Grand Pacific Hotel, Chicago, Thursday, June 12th, 1879, beginning at 8 p.m.

A. L. CLARK, Secretary.

Translations.

ARTICLE XII.

PROFESSOR LEFORT ON THE ANTISEPTIC TREATMENT OF WOUNDS. Translated by Henry M. Lyman, M.D.

The following abstract of an address by the distinguished Professor of Operative Surgery in the Paris School of Medicine, delivered before the Surgical Society of Paris, is published in *Le Progrès Médical*, March 22, 1879. It will be read with interest by those who, during the past ten years, have followed the course of events in the domain of surgical practice without suffering the unquestionably brilliant results of the new methods to blind their eyes against the fallacy of certain theories which have been urged in explanation. The experiments of M. Pasteur, which are here noticed, are of a character to which allusion is hardly ever made by that greatly over-rated gentleman.

"Two theories are now before us. The first, which has been advanced by Mr. Lister, and which can be called the *theory of externality*, affirms that a wound becomes poisoned through contact with the air. It is therfore necessary that poisonous air should be excluded from the wound, and the mode of dressing devised for this purpose has been described as the antiseptic method. M. Lucas Championnière has gone further than Mr. Lister, and has spoken of *antiseptic surgery*.

"The second theory advances the hypothesis that wounds secrete a special virus, called sepsin by certain authors; that this virus may be absorbed, and may thus produce more or less serious accidents. I cannot wholly accept either of these theories; I am confident that in certain cases, under the influence of certain dia-

thetic causes, constitutional conditions or bad hygiene, a wound may produce this poison, but that it will not occur in wounds treated under favorable circumstances. I also believe that in certain forms of so-called septicæmia — that indefinite general expression in which are merged so many differing conditions — contact with the air may be injurious. I think we may thus explain some of the phenomena of hectic fever. Clinically the fact seems to be demonstrated, and we know what precautions the surgeon adopts to prevent the entrance of air into a chronic cold abscess. But the general doctrine of M. Pasteur does not seem to me acceptable; it can be summarized in the following words: No germs, no suppuration. It is the germs, according to the theory, which produce the accidents; but, if so, since these germs are equally dispersed everywhere, why is the air of the hospital more noxious than that of the city? Why is the air of the city worse than that of the country? The wound is the same; if the air is the same, why should not accidents everywhere occur? I am very well aware that lately mention has been made of particular microbions. Davaine and Pasteur with remarkable adroitness and sagacity, have demonstrated that anthrax is due to a special proto-organism, and they have attempted to extend this theory to all infectious diseases. But the results have been negative. One of our professional masters has invited M. Pasteur into his hospital service, has placed under his charge two patients, of whom one was a victim of traumatic septicæmia, the other of purulent infection. M. Pasteur has made numerous investigations, but in neither case, either by direct examination or by cultivation, could he find bacteria.

"Besides, gentlemen, if we accept the theory of M. Pasteur, how shall we explain the success which attends the open method of of dressing? Roser, who succeeded Billroth at the Zurich hospital, has authorized the method of dressing without dressings; he places his stumps on cushions, without closing them, without protection of any sort, and his results have been better than those of Billroth, who practiced the method of close dressing. Wishing to have a clear idea regarding the dressing which the society of Moscow has recomended as the best, I employed it in a very serious case, a mechanic whose leg and thigh had been crushed

by a locomotive. After making a double amputation, I employed the open dressing and achieved a very fortunate result. I do not believe in the germ theory.

"I know very well that a false theory may yet be associated with good practice, and I hasten to state that Lister's dressing is an excellent dressing, and that it has given me splendid results. I, however, do not believe that the success which we now enjoy can be wholly explained by the new method. We pay greater attention to hygiene than when, in 1855, I laid before the Surgical Society the first international statistics, and we were distressed to learn that the mortality in our hospitals was greater than the hospital mortality in London. We have remedied the difficulties to which I then called attention; our patients are better fed, and that simple fact has something to do with the improvement of our results. But people still die, and they will die in spite of Lister's own dressing. I see that his mortality in amputation of the thigh is 26 per cent. My own statistics are better than that, only 20 per cent. for the same operation, three deaths in fifteen amputations. And I could tell you that one of these patients died of exhaustion at the end of forty-six days; that a second, amputated by one of our internes, and cured, had a conical stump, for which I resected the end of the bone, and that for some unknown reason he died suddenly during the day of the operation; that the third patient died within an hour after the amputation, without rallying from the traumatic shock. I will not dwell upon these statistics, for you can find them fully related in the *Bulletin of the Academy of Medicine*.

"I have experimented with Lister's dressing, and have had magnificent success. In my opinion, it is the method which best and most quickly produces immediate union. I ascribe this fact to the causticity of carbolized solutions. For carbolic acid I have substituted alcohol and sulphate of zinc, and I have obtained exactly the same prompt recovery and immediate union as with Lister's dressing; the proof, therefore, seems clear to my mind. The action of these caustic substances, the immobility and compression of the stump, the deep union of the flaps, are the elements which in my opinion constitute a good surgical dressing. * * * I believe that a wound in good condition does not pro-

duce a septic matter which can poison the system; but I do believe that under the influence of certain conditions of defective alimentation, of constitutional diathesis, or of moral depression, a wound may produce such a poison, which may be transported by the air, and especially by the hands, by the dressing apparatus, the linen, the sponges, or the topical applications, and may thus infect other patients."

ALCOHOL AS AN ANTIDOTE FOR STRYCHNIA.—(M. Hameau, *Gaz. Méd. de Bordeaux and Journ. de Méd.*, Jan., 1879, p. 27.)

The author reports certain experiments undertaken to learn the action of subcutaneous injections of alcohol in case of strychnine poisoning. A rabbit poisoned in this manner, and in a state of apparent death for five minutes, was injected with a gram of alcohol of 90°; in less than three minutes the members were extended, and were no longer convulsed when irritated. In twenty-five minutes the animal was on its feet, had no convulsions spontaneous or provoked, and ate. The next day it was in perfect health. The same experiment renewed several times, gave the same result, while rabbits poisoned with strychnine and left to themselves, never recovered.

On the other hand, the same quantity of alcohol in a rabbit not poisoned, plunged the animal into a state of stupor, and caused death the next day.

The efficacy of alcohol injections in case of strychnine poisoning, would appear to be sufficiently demonstrated by these experiments. It remains to be shown, whether alcohol may be considered as an antidote to the poison itself, or as a powerful sedative of which the action upon the cerebro-spinal system is diametrically opposed to the action of the strychnine, and would be useful when there was a nervous erethism to combat, under whatever form it presented itself. This last opinion appears the most probable. The author thinks alcohol thus used may be of use in poisoning by strychnia; it might also in tetanus if one dared employ it in sufficient doses by the endermic method. However, in the only case in which the remedy was used, it failed, but the case was already *in extremis*.

Selections.

ARTICLE XIII.

REPORT ON HISTOLOGY AND MICROSCOPY. By DR. G. F. WATERS.

By reference to the Transactions of the American Dental Association for 1877, page 43, discussion of Dr. Dean's paper on Dental Physiology, it will be seen that I referred to some strange appearances found within a cavity (in a section) of a tooth. Fig. 1 of the accompanying plate gives a view of this portion of the section enlarged forty diameters, and having some portion of the contents idealized at eighty diameters. This cavity was in the enamel, in the grinding surface of the palatal portion of the crown of the first left superior molar, and opened from a sulcus into which small particles of food, during mastication, were forced; subsequent fermentation would displace some of the impacted mass only to be replaced again at the next meal. This series of operations had continued for forty years, when the tooth was extracted, so that the penetration of the enamel and formation of the cavity were very gradual.

As we look into this cavity we desire to know what and from whence are these curious bodies. In pursuing an investigation for the purpose of elucidating these questions, we naturally first look to the various kinds of food that have been ground upon the tooth, and in them we find forms that very nearly, if not exactly, correspond with those found in this cavity of decay; and we shall be surprised at the vast number and variety of the minute cryptogamous forms of life to be met with in all articles of food, particularly the fruits, nuts and roots. In the sweet potato I find forms developing before decay, resembling B (which is an

enlargement of one of the forms found in the cavity in Fig. 1). They are dark but covered with spines more or less permeable by light, and having a length as to width of six or more to one. They appear before the mycelium of a well-known pencillium, and resemble in it no respect, and I trace no connection between the two, except that the spiny form seems always to precede the mycelium of this pencillium.

This mycelium is hyaline, smooth, of indefinite length, with many fine branches, and seldom exceeds the tenth of a millimeter in size. In growing, their course is between the cell-walls of the starch-grains, thus causing an old wilted potato to stiffen up and appear quite fresh. As they progress, sporidia-bearing filaments penetrate the starch-cells, changing their contents to carbonic acid, water and sporidia. Then, by the rupturing of the starch-cells, the potato suddenly becomes soft and is soon covered by white spore-bearing filaments, in which condition it presents the apperance of the body found in the sulcus in Fig. 1, marked A, enormously magnified, an enlarged view of which is given in the white square on the enamel. It will be seen that the potato may be considered good food, whilst largely composed of fungoid forms, mycelium and sporidia. When the potato is cooked — more especially when baked — the part infested by the fungi will be found harder and darker than the other parts, and also to give off a peculiarly disagreeable odor. Heat, sufficient to cook the potato, seems to destroy the vitality of the fungi, so that when thus eaten, they do not seem to disturb the digestion.

What I have said of these forms of fungi in the apparently healthy potato, M. C. Cook, in his "Rust, Smut, Mildew and Mould," has said of many other articles of food which I have been in the habit of eating (as the sweet potato) uncooked. Apples, pears, and peaches have — in addition to form alluded to above which grow within — other forms growing upon their surface, allied to lichens. In the beet, turnip and onion, whilst in an anticarious condition, fungoid forms were discovered resembling some of those found in this cavity, but which are not here illustrated. The castana or Brazil nut showed a large variety of fungi. In one of these, microscopic truffles, or bodies resembling the truffle, were found packed solidly throughout the entire mass.

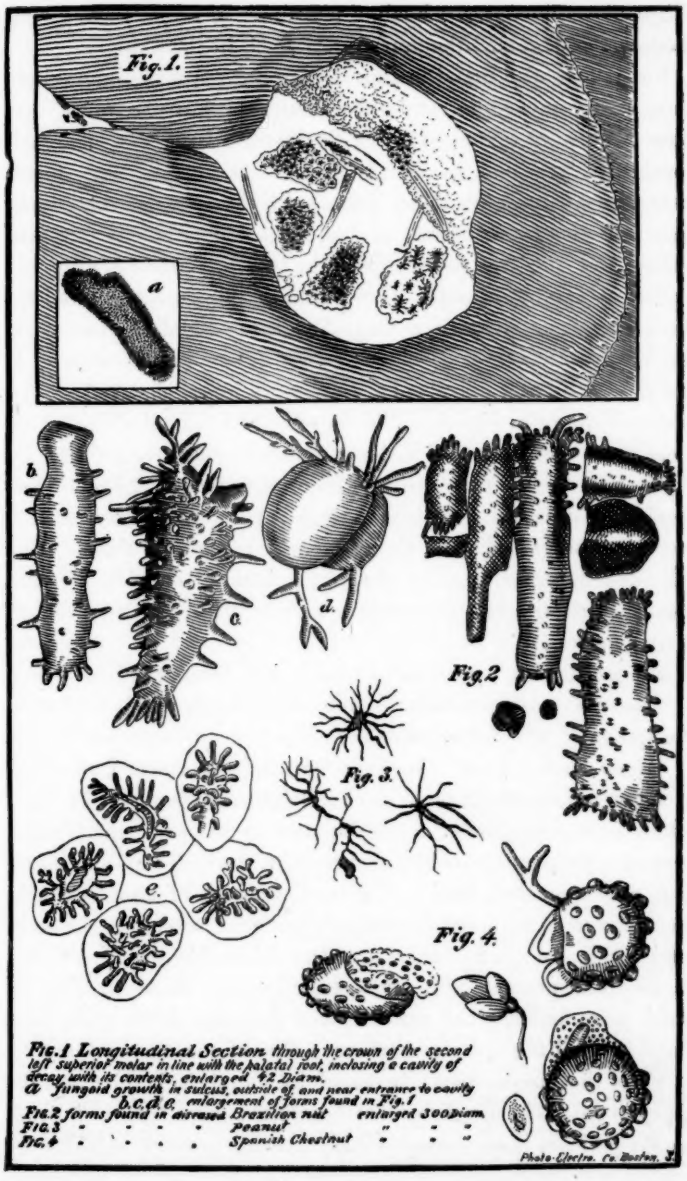

Fig. 1 Longitudinal Section through the crown of the second left superior molar in line with the palatal root, inclosing a cavity of decay, with its contents, enlarged 42 Diam.
a Fungoid growth in sulcus, outside of and near entrance to cavity
b.c.d.e. enlargement of forms found in Fig. 1
Fig. 2 forms found in disease Brazilion nut enlarged 300 Diam.
Fig. 3 " " " peanut " " "
Fig. 4 " " " Spanish Chestnut " " "

Photo-Electro. Co. Boston.

When placed in water, a hyaline mycelium was developed, giving them when magnified the appearance of D, in the plate.

Fungi were also found in this nut having red mycelium, others with yellow mycelium, and others still with white mycelium. Some nuts were examined in which the meat had been changed, apparently by fungi, to palmic acid. Other crystalline forms were present that gave under polarized light a varied and most beautiful appearance, such as feathers, fleecy clouds, tropical palms, and the frost-work upon the window-panes — all most brilliantly rainbow-tinted. One portion of this nut, mounted for the microscope, gave, when magnified three hundred diameters, the forms seen in Fig. 2, which are not unlike in appearance B and C — the latter being enlargements of forms observed in the cavity of decay in Fig. 1. The mites which invested many of these nuts were destroyed in large numbers, at a tender age, by a red spore fungus which had a yellow mycelium. I found red sporidia of this fungus both in eggs, and young mites in the sacculated stage. The adult mites seemed free from them. The full-sized sporidia were as large as human blood-disks, and seemed filled with minute spores not more than the fifteenth of their diameter.

The pecan nuts examined had, with but few exceptions — and in these the meat was bitter — the mesocarp packed solid with the spores of a red fungus containing a very large percentage of tannic acid. From less than a pint of the shells I obtained over two ounces of tannic acid of a bright ruby color. The mycelium of this fungus in its development in an open vessel, when kept at a temperature of 98° Fahrenheit, gave off fumes of acetic acid, and upon the addition of a amall amount of aqua-ammonia the fumes were rendered exceedingly pungent, resembling those of nitric acid. In some of these nuts the red fungus was absent, but another was present with forms exactly like those in Fig. 3, which were found in the peanut. All the same forms were also found in the little red checkerberry, *Gaultheria procumbens*.

All of the single forms invested by fungi had this ray-like appearance. The English filbert exhibited three forms of fungi growing within it — one constantly present growing within the substance of the cotyledons, the mycelium of which was so minute

as not to be traceable in a microscopic section, but when sown in a tumbler of water it developed with great rapidity and formed a net-work throughout, giving it an opalescent appearance. In a short time a dense film formed upon the surface, which gave off a highly offensive odor. It was whilst experimenting with this fungus that I was six times prostrated by typhoid fever, or a fever resembling typhoid, which yielded quite readily at first to an aborative treatment, consisting of an internal exhibition of bisulphite of soda and carbolic acid combined. Subsequent effects, however, compelled me to give up the further study of this fungus.

The other fungi developing between the pericarp of the cotyledons merit a passing notice. One of them resembles minute cocoons of a lepidopterous insect, being minute globes composed of yellow mycelium and containing within red spores. The other showed red mycelium with long club-shaped spore heads with spores growing in sulci upon it. All the spores in this nut were very much smaller than those found in the Brazil or the pecan nut. The forms illustrated on the plate at Fig. 4 were found in the Spanish chestnut, and exhibit the minuteness of the spores, and also show their gradual development as well as the commencement of the growth of mycelium. One body, centrally situated, shows the development of spores by gemmation. Other forms show the development of spores by septation. The spores in two cases are seen escaping from the sporidia.

M. C. Cook, in his account of the British fungi, says that the cryptogamous, unlike the phanerogamous plants, give off carbonic acid and absorb oxygen. We generally recognize such to be the case with some of the ferments, while others give off acetic acid, as was the case with the fungus found in the pecan nut, and as also is the case with the "mother" which grows upon the surface of cider when exposed to the air. There are facts which seem to show *that the only limit to the acid products of these bodies — the fnngi — is the constitution and condition of the substance in which they find lodgment and are capable of developing.* The vast number of these bodies may be inferred when it is known that mycologists at the present time, with a liberal allowance for hair-splitting, reckon among British species of flow-

ering plants only one-fourth of the number of the fungi alone, not to mention ferns, mosses, algæ, and lichens. There are strong reasons for believing that carbonic oxide is also developed by some of these low forms of vegetable life. Would it not be proper to call them vegetable deaths? It is not clear to my mind that any of these, if left, would multiply for any length of time at the expense of the tooth, but it is perfectly clear that many of them have been introduced with particles of food, where by their presence they have exerted an injurious effect upon the tooth substance, in that they have acted to decompose the food with which they were associated, if not also to decompose portions of the tooth.

It is well known that in all fermentable substances, fermentation is started by the presence of an azotized body; that the fermentable substance changes and has formed within it, as a result of this fermentation, some acid; that fermentative changes take place with varying rapidity, according to the more or less favorable conditions of temperature and moisture; that the buccal cavity is, in a normal condition, most highly favorable to such changes; that all foods are more or less infested by some form of fungus; that the air is, to a great extent, at the sea-level, and over most of the earth's surface, so impregnated with cryptogamous spores (and all cryptogamous spores are nitrogenous) that foods can only be kept from fermentation for any length of time by destroying the azotized bodies with which they are in contact by the application of a temperature sufficiently high to destroy all such life, or by combining with them certain chemical agents. It is also well known that all foods not so protected against contact with azotized bodies will, in the presence of sufficient warmth and moisture, be liable to destructive fermentation. Hence it may be seen that wherever there are imperfections in teeth, or places where a lodgment of food or fermentable matter may occur, there will be a liability to the formation of acids, and of course to the solution of lime-salts in the contiguous portion of the tooth. So that all imperfections that cannot be so filled as to perfectly secure them from further lodgments should be so shaped as to readily be kept clean by friction. Teeth with soft enamel will naturally be the most difficult to preserve by filling,

as in such teeth the crystals of enamel are more loosely put together, the spaces between them more easily penetrated by foreign substances; and a greater difficulty will be found in coapting the filling, of whatever nature, to the surfaces of such teeth than to the surfaces of the more dense and perfect. And it will be understood that the softer and more pliable the filling material, the more readily will it pass into the inequalities of the surface, and hence more perfectly protect it. But it happens, most unfortunately, that of the substances used for such filling purposes, the one most stable is the most difficult to adapt perfectly to the minute inequalities of the walls of a cavity.

With these facts in view, it is not necessary to consider gold as "incompatible with tooth-substance," in order to account for the failures which in certain cases have been attributed to it. But this difficulty attending the adaptation of gold to the walls of the cavity is easily overcome, for nature has not left us without a fitting substance to fill these minute scratches and imperfections of soft teeth, to the entire exclusion of the minute spores we have had under discussion. This substance will no more sustain the life of a fungoid spore than will carbonic monoxyde the life of a human being. It is pliant, inodorous, tasteless, non-oxydizable, non-volatile, non-irritant even to the pulps of teeth, by which it is readily absorbed, inducing in them the highest functional activity compatible with comfort to the individual. The substance is vaseline.* With the aid of vaseline the dentist will now be enabled to save the soft teeth as readily with gold as he formerly did those of denser structure.

My method of using this material is as follows:

After having prepared the cavity for filling by the removal of débris and carious walls, and by properly shaping it, I destroy the lower forms of life in the walls of the cavity, so far as I am able, by the use of a saturated aqueous solution of carbolic acid and a saturated aqueous solution of bisulphite of soda, singly or combined. I then dry the cavity with bibulous paper, and with a small wad of the same rub into its surface the vaseline, leaving a

* Vaseline is one of the products obtained from petroleum by repeated filtration through boneblack, according to a process patented by Robert A. Cheesebrough, and furnished by him to the profession, without a royalty.

super-abundance in the cavity until I am ready to fill. I then wipe the cavity clean, just as the steel and copper-plate printers do the face of the plate when about to print from it. And just as the ink is retained in the lines and scratches of his plate, so will the vaseline be in the porous enamel and scratches in the dentine, to the exclusion of other foreign matter.

ALTERATIONS OF THE SYMPATHETIC IN A CASE OF PERNICIOUS ANÆMIA. Brigidi. (*Lo Sperimentale, V*, '78.)

Since Birmer's discovery of certain changes in the tissues the attention of other pathologists has been directed to the origin of this anæmia. A domestic aged 53, died of a slowly developed, progressive, pernicious anæmia; post mortem section revealed an enormous deposit of fat in the panniculus adiposus, but no further changes in the heart or other viscera.

But the cardiac plexus in the fresh state showed an enormous granular proliferation, so that at many points the nerve cells were compressed; at others they were pigmented; the blood vessels were empty. In the ganglion hardened by alcohol, nerve cells were found scatteringly, their places being occupied by groups of small elements which appeared like nucleoli. These appearances led the writer to explain the pathological processes thus: The endothelium lining the capsule of the ganglion gradually enlarges, compressing the nerve cells and forming more and more granulations, a few of which take on a bronzed color whilst others undergo a fatty degeneration. At last both nerve cells and fibers succumb. The empty blood vessels of the ganglion also present an unusual proliferation of endothelium. In the immediate vicinity of the ganglion a large quantity of connective tissue, poorly supplied with nerves, is found. Inasmuch as this ganglion influences the blood supply of the chylopoëtic apparatus, digestion and assimilation are poorly performed, respiration diminishes in frequency, oxidation of blood is retarded, the fatty elements of the blood increase, fat is deposited, and the processes run in a vicious circle. (*Cin. Lancet and Clinic, Jan.* '79.)

Foreign Correspondence.

ARTICLE XIV.

LONDON, April 26, 1879.

Messrs. Editors: — Even great London, with its stirring millions, its thousands distressed, diseased and halt and lame, fails to furnish much, or even anything, other than the common ills flesh is heir to. The question how best to relieve these ills, is here answered in terms so often heard and hence so familiar that one almost doubts whether his feet are not resting upon the New World. Of course individualities are seen here and there, in these men and in the things they do, even to the care shown the afflicted under their charge; still, it is mostly an oft-repeated story. Living encyclopædias of the pathological, etiological and symptomatological in the history of every disease and injury, it yet rather surprises one that few, very few, positive assertions come from these men. They seem to be troubled with doubts, although filled to overflowing; yet more is wanted and sought after. Things go contrariwise so often; happenings fail to bear out suppositions in provokingly high ratios. Chaff is more plenty than wheat, in volume if not in weight and worth. Great richness of experience, the outgrowth of familiarity with multitudes of cases, fails to confer infallibility even on the most acute men, either as operators or diagnosticians. Operative blunderings and mistaken diagnoses are things not unheard of even 3,000 miles away from home, and certainly it is somewhat of a comfort to be able to think and say that as yet nothing has been seen that would induce me to speak in the least degree disparagingly of my countrymen on either score. High water mark measures no further up on the walls of stone here than it does

within rifle range of my own door. "Good cheer, brethren," be our motto. "*Toujours de l'Audacité!*" I believe the quotation is French; my proximity to that nation is ample excuse for its use, and besides, when written so, the motto is robbed of some of its boldness.

Some ten or twelve years ago, the late Professor Freer enunciated a principle of procedure in the formation of a gastric fistula in dogs for class experimentation, which he said must be carefully carried out in order that the operation might be successful. This important element of safety consisted in so doing the operation as to provide for firm and extensive adhesions between the stomach and abdominal walls, before any opening is made into the stomach itself. Prof. Freer always made application in his teachings of the same course of procedure, which ought to be carried out, he said, with minute care, in all operations of a like nature done upon the human body.

The operation for making a permanent opening into the stomach, called gastrostomy, done to prolong life and relieve the agony of patients suffering from closure of the œsophagus as the result of disease, or the mere opening of it for the removal of foreign bodies, is recommended as a proper surgical procedure, and has been done a number of times — still, to Mr. Howse, of Guy's Hospital, is certainly due the credit of demonstrating its absolute feasibility, comparative safety and evident necessity.

Mr. Howse considers that the uniformly successful result following his efforts so far is mainly due to the special method of procedure which he has followed in all his cases; this manner of operating accomplishes perfectly the very desideratum which Prof. Freer deemed so necessary and urgently advised. The first part of the operation is devoted to and done with the intention of securing a firm wide attachment of the stomach to the abdominal walls. This consists in fastening the two together by ligatures introduced in a special manner and leaving them so attached for five or six days, which is long enough, according to Mr. Howse's experience, to develop firm union; after which the stomach itself is opened. In none of these cases was there any undue inflammation or any other interference with the progress of the case to recovery. The fistula is completed by opening the

stomach through the lips of the abdomino-gastric junction — a proper gum elastic tube is introduced into the cavity of the viscus and retained there by strapping, and through this tube the patient can be fed without discomfort or trouble.

Mr. Howse naturally expresses the hope, encouraged as he is by his successes, following the operation, that this procedure will be earlier resorted to in the class of cases for which it is oftenest done — epithelioma of the œsophagus, and in addition that it will come to be looked upon as a necessary and accepted course of treatment in cases of traumatic occlusion or specific stricture. Up to the present time five operations have been done by him, four for closure of the œsophagus by epithelioma and one for traumatic stricture.

Of those done for epithelioma, one lived seven months after the operation and finally died from extension of the cancerous disease to surrounding vital organs. During this long period the patient was entirely free from the agonizing distress incidental to slow starvation — feeding herself comfortably and easily through the tube or external œsophagus. I might even justly say that the feeding was not robbed of enjoyment, for the patient masticated her food and then introduced it into the stomach through the tube. Two others, operated upon for the same disease, lived for weeks and months respectively, and died from epithelioma of the lungs, each deriving benefit from the operation. The fourth one died from renal coma a few days subsequent to the operation. In none of them was there the least discomfort arising from the operation, and the pathological specimens of each case, now preserved in the museum, demonstrate positively that in neither case was there any peritonitis developed from the interference, as is shown by the entire absence of any adhesions other than those sought for and obtained between the stomach and abdominal walls.

Through Mr. Howse's courtesy and kindness to me, I witnessed the operation in the fifth case, and have seen the patient several times during the several weeks following the operation, and can bear witness to the comfortable condition of the patient, the relief afforded her, and to the absolute absence of any local trouble from the wound. The patient had swallowed a quantity

of muriatic acid with suicidal intentions some months ago, and, as a consequence of this act, stricture of the œsophagus had gradually developed, defying and resenting all efforts at dilatation. Any such like attempts at relief were followed by severe bleeding and other bad signs, sufficient to make the efforts dangerous. Mr. Howse did the operation partly to avoid expected emaciation from inability to swallow, but mainly to put the parts above absolutely at rest for months, so that all granulating surfaces might become healed over and toleration of dilating instruments follow. If this result came about, well and good; if not, then the patient could live quite comfortably with the new mouth to her stomach — digestion, apparently, being very little affected by the new way of taking food. An oblique incision was made, about 9 Cm. long, parallel to the cartilaginous margin of the chest on the left side, in the epigastric region, far enough away from the cartilage to allow of room for the application of the outside row of stitches used to fasten the stomach to the abdominal walls, and carried down to the rectus abdominis muscle, the fibers of which were the landmark as to position. The under layer of its sheath is the indication of close proximity to the peritoneum. All bleeding vessels were controlled with catgut ligatures. The peritoneum was then carefully opened and the anterior wall of the stomach sought for. Mr. Howse gives three means of recognizing this organ. The mistake of opening the transverse colon has been made, but according to him such an accident should never happen. 1st, the walls of the stomach are much thicker than those of any intestine; 2d, the color is lighter, and there are no longitudinal fibers; 3d, the two layers of the omentum, passing from the stomach to the colon, can be easily recognized. Having reached the stomach, the next step is to stitch it to the abdominal walls, and in this consists the essential part of the operation, and this part must be carefully and accurately done. He employs two rows of sutures. The first introduced at intervals of 1 Cm. from each other all around the margin of the external wound, fully 3½ Cm. from that margin. The second joins the stomach to the edges of the incision, leaving about 1 Cm. of its surface exposed in the wound, as its edges are subsequently drawn together. In passing

all of the sutures into the walls of the stomach, great care is taken to prevent the needle entering the cavity of that organ. Great stress is laid upon this matter, for if they do enter, fatal peritonitis is quite sure to follow upon the escape of gas or other matters through even these slight wounds. With the greatest impunity and entire absence of any dread of doing harm, the stomach walls are grasped by the fingers at the points chosen for the introduction of the needle, and in this way the operator absosolutely assures himself that only the peritoneal covering and a portion of the muscular coat is pierced by the needle or included in the ligature. Perhaps a quarter of an inch of tissue is taken up in the grasp of each suture. Of course the needle is first passed through the entire thickness of the abdominal walls at the proper distance from the edge of the entrance wound, then through the stomach with the care specified, then out through the external coverings of the body again, and finally the two ends are tied over a piece of catheter; to give breadth of contact between the two parts and to prevent puckering. All the sutures of the outer row were thus carefully introduced until the entire circuit of the external wound was made; cat-gut was used for these sutures. The edges of the external wound were then united to the stomach in the same careful manner, and finally the wound itself was closed almost entirely by sutures. A silver ligature was introduced into the walls of the stomach to indicate the point at which the knife should be introduced into it, to complete the fistula after sufficient time had elapsed, to be sure that the adhesions desired were sufficiently firm. In all the five cases operated upon, this final opening was safely made; the post mortem examination in those who died showing the union complete and perfect. The feeding tube is then introduced, and all is well. Mr. Howse is a firm believer in the benefits of Mr. Lister's antiseptic dressing, and carries out that method of treatment in all operations, and to its great aid gives the credit of the safety after this rather formidable operation. One of Mr. Howse's colleagues at Guy's, has done the operation twice; once for epithelioma, and once for syphilitic stricture. The first of these died in a few days from general prostration, the operation being done after the old plan, such as is followed in colotomy. The second was done

with all the care so earnestly insisted upon and followed out by Mr. Howse, and is now living comfortably with the fistula completely established, five months after the operation. So a great deal of credit must be accorded to the *method* of doing the operation.

Again, Mr. Howse is a skillful, very careful and exceedingly ready operator—absolutely sure of his anatomy in minutiæ—and in these happy possessions, we must recognize great elements of success. You will pardon me for alluding to another somewhat heroic procedure practiced by him in the treatment of omental hernia. A large number of successful cases has convinced him that the best plan of treatment is to cut down upon the protruding mass, and remove it. They always grow longer, predispose to the formation of intestinal hernia, are liable to become strangulated, are never safely controlled by a truss, have never given rise to any trouble when removed under the spray, and the cure is radical. The base is tied with carbolized silk and dropped after the mass is cut away. Two excellent reasons are given: 1st, it is perfectly safe; 2d, it is a sure cure.

Several cases of admirable cure of nævi have come under my notice following treatment by the astringent caustic sodium ethylate. This caustic is made by putting pieces of metallic sodium into a small quantity of absolute alcohol in a wide-necked dish until the bubbles of gas cease to rise, when we have a snow-like, semi-crystallized substance. To this is added about its own bulk of absolute alcohol again, and there results a brownish-colored fluid about like ordinary mucilage, which should be kept in a glass-stoppered bottle fitted with a glass rod for application. It is applied to the surface of the nævoid tissue once a week, or once a month, according as the resulting eschar falls. Its application is accompanied with very slight pain; the resulting cure is all that can be desired; scarcely any evidence of cicatrix or whitening following. Large venous nævi are successfully cured by Mr. Thomas Smith, of St. Bartholomew's, by introducing large strands of yarn, soaked in the per-cholride of iron, through the mass in all directions, by means of a good-sized needle, so that the iron will not be squeezed out of the yarn by the edges of the wound. The yarn is left in some days until free suppuration is

excited. By the way, I hope the gentleman last mentioned will forgive me for saying that he is the neatest and most expert operator in general surgery that I have seen in London.

There is at least one gentleman in London who does not believe in doing osteotomy for genu valgum; on the contrary, he thinks such interference uncalled for in children and very seldom necessary at any time of life. This is Mr. Brodhurst of the Royal Orthopedic Hospital, an authority on such questions whose statements are of great value. His first objection is based upon the fact that death has more than once followed as the result of the operation; second, that if no fatal result ensue, anchylosis and loss of joint does occur quite often; third, the deformity is, in many instances, scarcely benefited at all by this hazardous procedure; fourth, what is far more important, perfectly satifactory results and relief of deformity can be obtained in a much simpler way, namely: by subcutaneous division of the tendon of the biceps femoris muscle, and the external lateral ligament of the knee joint. This simple operation is to be followed by the use of side splints, so adapted as to keep the parts in line for a sufficient time. Mr. Brodhurst showed me a girl, 17 years of age, in whose case he adopted this plan of relieving excessive deformity from genu valgum, and the result was perfect in all respects.

He speaks confidently about his own method, and urgently advises against the major operation. There is no deformity incident to shortened tendons or contracted tissue of any kind, but what is relieved at this hospital, no matter what the original cause of the trouble. The skill in operating is unsurpassed, and the subsequent treatment remarkable only for the gentleness in application of restraining appliances. The universal splint is one made of tinned hoop-iron, about 1½ Cm. broad. It is perfectly pliable and can be moulded to any case of talipes, however misshapen; and upon it they rely to gradually bring the parts into proper position after division of tendons. No attempt at extension is made until after the wounds of tenotomy have entirely healed. Their rule is to divide everything that is tight. Varus is treated according to an invariable rule; first, bring the foot into line with the leg by division of the anterior and posterior tibial tendons with the plantar fascia if necessary. No more is done until

the cure of this part is secured, then the second part of the treatment is commenced by curing the equinus, after the usual method of dividing the tendo Achillis.

No one can avoid expressing wonder at the marvelous results of treatment in this hospital. I saw less blood from the division of several tendons in twenty different cases, than I have seen follow one case of cutting the tendo Achillis in many instances. The knife used is small in the blade, introduced close to the tendon and beneath it, and the cut made outwards. A probe-pointed knife is used only for the tibialis posticus tendon and the plantar fascia. So satisfactory are the results from the use of the splints above mentioned, they very seldom find it necessary to use special shoes for talipes—I might say never in young children.

I listened to a very valuable paper read before the Clinical Society of London one week ago, on amputation of the hip joint, the principal interest to me centering in the novel method adopted and used to control hæmorrhage. This new and truly novel method has been introduced lately by Mr. Davy. It is done by means of a wooden lever about 60 Cm. long, measuring 2½ Cm. in diameter at either end for 15 Cm. of the length; being only 2 Cm. in diameter for the remainder. It is turned perfectly smooth and is well polished, the ends being slightly rounded. It is introduced into the patient's rectum sufficiently far for the end to rest in the hollow opposite to the sacro-iliac synchondrosis, between the psoas muscles and the base of the sacrum, where it is made to rest upon the common iliac artery, controlling the blood current perfectly; so that not a drop of blood is lost, except while the pressure is relieved to secure the smaller arteries. It has been used four or five times successfully and without any apparent damage whatever. The pressure is made by elevating the outer end, using the anus as a fulcrum. The instrument or lever, is steadied by holding it against the opposite thigh.

I am reminded that this letter has approached the elements of a course of lectures on physiology, so far as the beginning and ending go. We began at the stomach and have concluded as above. That is long enough certainly if measured by feet.

C. T. PARKES.

ARTICLE XV.

LONDON, 15 HARLEY STREET, W., May 3, 1879.

To the Editor of the Chicago Medical Journal and Examiner:

SIR: My attention has been called to an article in your issue of March last, on "Emmet's Operation," by Dr. E. C. Dudley, in which occurs the following passage: "Either from absolute "ignorance, or from profound prejudice, or from a carelessness "which in the law would amount to malice, the most exhaustive "gynæcological works in England (Barnes), France (Leblond), "and Germany (Hegar, Kaltenbach, Schrœder) are absolutely "silent."

"Big words!" It is not my affair to inquire how far they may be justly applied to Leblond, Hegar, Kaltenbach and Schrœder. As to me they possibly might be applied, *if the allegation were only true* that I had been "absolutely silent" about "Emmet's operation." But as a matter of fact I have mentioned it, and with the unqualified respect which I entertain for one of the most able and illustrious of my American friends. At page 873, 2d edition, of my "Diseases of Women," 1878, I give a compendious summary of Emmet's operation, quoting the source (*American Journal of Obstetrics*, 1874), and I conclude with the following appreciation: "I can confirm the accuracy of Emmet's views. I have performed his operation with satisfactory results."

So, if there is "absolute ignorance" it is not mine; if there is "profound prejudice," it is not mine; and if there is "carelessness amounting to malice," it is not mine. It is possible that Dr. Dudley is misled by copying a similar impeachment made against me by Dr. Paul Mundé, in the *American Journal of Obstetrics*, instead of reading my book for himself? Dr. Mundé has since apologized to me for his error. Dr. Dudley will no doubt do the same. As I am entitled to damages I claim the right to fix the penalty. I condemn him to read my book, and caution him never again to accept statements at second hand. I am, sir, yours sincerely, ROBERT BARNES.

Domestic Correspondence.

ARTICLE XVI.

NEW YORK CITY, May 1879.

Messrs. Editors:—The question of what to do with our tenement-house population is becoming a serious one, both to sanitarians and economists. The five hundred thousand people who live here in these structures contribute to more than two-thirds of the city's mortality and a still larger per cent. of its crime. It would seem as though decency, morality and health diminished as the overcrowding of houses and homes increased. And not much can be expected when four families occupy a single room and the domestic life of each is limited by a chalk line. We have had a "Tenement-house Sunday" when the matter was discussed in all the pulpits, and this has been followed by a number of public meetings and the final organization of a company for building model tenement houses. The great difficulty lies in the small size of Manhattan Island. For no matter how model a tenement may be, it must be a many-storied one, and such can never be so good or effective as a number of small houses or cottages like those Philadelphia gives to her workmen. We are attempting these, however, also, and it is believed that they will be a financial success in spite of high rents. In addition to this, large model tenements are projected and some already built. The principal features of these are that each floor is separate and reached only by outside staircases, and that careful provision is made for light, air and the removal of garbage.

The County Medical Society has been in a state of mind recently over the abuses of medical charity. We have six large dispensaries in the city, and from thirty to forty smaller and more

or less special ones. These treat gratuitously about a fourth of the city's population, that is, from 250,000 to 300,000, in the course of the year. Of course a great many of these can well afford to pay the doctor and the younger and struggling members of the profession are thus directly injured. Yet the doctors are chiefly to blame for this after all. It is they who have encouraged the unnecessary multiplication of dispensaries; there is a constant struggling and wire-pulling for appointments among them, and a constant effort to increase the number of the patients in order to have an interesting service. While such things exist, while there are plenty of doctors ready to submit to any rules, however humiliating, for the sake of an appointment, it is idle to expect any radical reform. Indeed the trouble lies deeper than this. The profession is too over-crowded for healthy competition and the schools are grinding out more and more every year. We have nearly twenty-eight hundred physicians of one kind and another in the city, and besides the fact of superfluity, not more than a quarter are members of societies that could enforce discipline. We presume therefore that the county society after heating itself with a few evenings of debate will appoint a committee and the committee will report, and resolutions will be adopted and things will go on much as before.

We by no means wish, however, to give the opinion that things are in a desperately gloomy state. As far as appearances indicate the physician continues to earn his living and to live in harmony with his neighbors and brethren. And though a quarter of a million get their pills and paregoric free at the dispensaries, a few are left to call at the office on the usual terms. Besides it is probable that some amelioration at least of the present abuses can be obtained. There is a rich hospital here, the New York Hospital, which at the instigation of a homœopathic trustee, has offered publicly medical advice to any one on condition of the receipt of a modest monthly stipend, amounting to one dollar. This is a disgraceful prostitution of medical service, which it does not seem possible can continue in the face of the strong sentiment against it among all the members of the profession except those who are bribed to acquiesence by their hospital appointment. The plan of obliging every patient who can do so to pay a small sum for medicine and

prescription has been introduced quite generally into the dispensaries and is considered a success by most of the officers of those institutions. In London, where evils much like our own exist, the Provident Dispensary system is being tried to some extent. This consists in forming persons whose wages do not exceed $6 or $8 a week into a sort of Health Insurance Company. A small sum is paid every week into the general fund and in return the medical officers take care of the members when sick. Such societies are liable to abuses and all have not succeeded, but when carefully conducted they may be very efficient substitutes for or auxiliaries of the ordinary dispensary.

One of the wealthiest and best conducted of the city's hospitals is the Roosevelt. It has a magnificent endowment, is thoroughly built and perfectly managed by its superintendent, Dr. Paine. It is constructed to a certain extent on the pavilion plan, the wards occupying two long separate buildings, one for the medical and the other for surgical cases. The buildings are connected only by corridors. The antiseptic treatment was early introduced here and carried out in every detail by Dr. Weir, who is one of the very few surgeons if not the only one who does seem always to be mindful of the minutiæ. The results have been satisfactory here as in the other city hospitals. Not all the visiting surgeons use it uniformly, but when anything of especial importance is to be done it is noticeable that they consider it best to give the patient whatever additional chance it may furnish. Though abandoned for a time at the Woman's Hospital as I wrote in my last letter, it has now been resumed there. At Roosevelt it is now succeeding admirably in compound fractures. At first it was found that though the limb did pretty well, yet necrosis was very apt to occur. The plan was then adopted of first opening the wound, cleaning it thoroughly and sawing off any ragged ends of bones, the dressing being applied after this as usual. Since then necrosis has not occurred.

A remarkable illustration of what a Lister dressing may do occurred a short time ago. A boy was brought in with a severe lacerated wound of the scalp, extending transversely across the vertex, tearing up much of the scalp and nearly removing the left ear which hung only by a little skin and subcutaneous tissue. The

wound was dressed antiseptically and in two days it had all healed except of course the cartilaginous part of the ear which, however, subsequently gave no trouble. Instead of the carbolized gauze usually employed by Lister, jute is used, which has been soaked in a solution of benzine and carbolic acid. It is a little cheaper and more efficient than the gauze.

The gum bandage is being used very extensively; in synovitis, arthritis, in sprains and bruises it seems to act remarkably well. Its magical effect on old ulcers is not so prominent. The ordinary treatment for these is to first wash them off with carbolized water, 1 to 20, then cover them with cotton that has been soaked in a saturated solution of boracic acid; over this the gum bandage is applied. Under this treatment the ulcers soon fill up with granulations, but cicatrization is by no means rapid, and it seems to be thought by the staff that those who have secured such wonderful results with this bandage have mistaken granulation for cicatrization. Buck's extension is still the popular method here of treating fractures of the thigh, although at some of the other hospitals the double-inclined plane may be seen.

Roosevelt is one of the hospitals which seem to ignore the fact that such institutions are built not to cure the sick, but to furnish clinical material for professors and students. In spite of its excellent run of cases very little teaching is done over them, and students are rarely seen in the wards. Even a proposal of a New York pathologist to build a pathological laboratory there at his own expense, for study and teaching, was refused. The contributions of the hospital therefore to medical and surgical science come through its attending medical officers. It is well enough perhaps that there should be some hospitals that are almost purely humanitarian institutions.

ARTICLE XVII.

WASHINGTON, D. C., May 20, 1879.

Editors Chicago Medical Journal and Examiner—GENTN:—In your courteous reference to the *Index Medicus* in the last number of the JOURNAL, you extract from M. Petit's article in *l' Union Médicale* the names which he gives of 25 publications

not included in the list of journals, etc., published in the January number of the *Index*. By mentioning merely these supposed omissions I fear you inadvertently do injustice to M. Petit, whose criticism abounds in flattering commendation and generous welcome.

Of the 25 titles not included in our list of 816, I find that 14 were new journals, which had been ordered, but were not received when our January number was compiled. We included nothing in our list which was not actually in our power to index. Ten of these have been since received and indexed, four are yet to arrive. Six other titles belong to publications not within our plan, being 2 dental, 1 educational, and 3 devoted to natural sciences. It was a mistake to mention the *Deutches Archiv für Geschichte der Medicin*, as omitted; it will be found on page 9. Three others, irregular publications, are duly received and indexed, but are hardly to be classed as *current*. Of the remaining two, one is, I suspect, incorrectly described, reports being given for proceedings; the last, alas, was unknown to us. Very truly yours, ROBERT FLETCHER, M.D.

We publish Dr. Fletcher's note, given above, with a great deal of pleasure, and are glad of the opportunity thus afforded of adding a word of explanation. In the copy originally sent by us to the printers, we made a full abstract of M. Petit's remarks, including his really flattering encomium of the *Index Medicus*, which we conceive to be one of the most brilliant and valuable additions ever made to American periodical literature. We stated further, that the suggestions of M. Petit, which were evidently made with the kindest intention, had been without doubt, already considered by the efficient editors of the *Index*.

The whole "matter" of this "copy," in consequence of want of space, was cut down to a mere introduction and the list which followed. It will be remembered by our readers that the portion actually published, was in the form of a "filling," intended merely to complete the page upon which it appeared, hence the accident which may have given to our lines a color they never were intended to produce.

We repeat, that we are glad of the opportunity thus afforded of

expressing our estimate of the journal in question. It is certainly one of the most permanently valuable medical publications which appear in any language or in any country. It should be in the hands of every medical gentleman who aims to be a teacher, an author or an expert, and of every one who aims to become thoroughly familiar with the literature of any given medical subject. The *Index* deserves the generous support of the profession of all countries. ED.

HEMP SMOKING IN TETANUS. (*Indian Med. Gaz. Aug.* '78.) Mr. Khastagîr has successfully treated five cases of traumatic tetanus under the effect of ganja (hemp) smoking. This remedy has long been known, but has fallen into disrepute owing to the use of the hemp by the stomach instead of by smoking, the insufficiency of the doses, and to its being used as an auxiliary to some more potent remedy, and its effects hence neglected. A pipe filled with about 1.0 of dried leaves is kept ever ready near the patient. On every reappearance of a spasm the patient is made to smoke till the leaves are burnt to ashes, on which the muscles of the body instantly relax, the patient shuts his eyes and seems to go to sleep. The pipe is again charged and the advent of the next spasm watched for. In this way the drug has been administered day and night. The longest time which the hemp took to cure was seven weeks, the shortest six days.

Proper attention must of course be given to nutrition and proper evacuation of the bowels. This method has the advantage of being, as it were, self-regulating; the attendant knows when enough has been given as well as when more is needed. It is, however, of course inapplicable for children. (*Practitioner.*)

CORYZA. (*Gazz. Med. Ital., Jan.* '79.) Dr. Rudolphi recommends the use of eucalyptus globulus for the rapid cure of acute coryza or "cold in the head." He has found, by numerous trials on himself and patients, that after chewing a few of the dried leaves and slowly swallowing the saliva, the affection is promptly relieved; often disappearing in the course of half an hour. The remedy is only useful in acute cases. (*Med. Record.*)

Reviews and Book Notices.

ARTICLE XVIII. — PRINCIPLES AND PRACTICE OF GYNÆCOLOGY, FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. In one large and very handsome octavo volume of 853 pages, with 130 illustrations. By Thomas Addis Emmet, Surgeon to the Woman's Hospital in the State of New York. Henry C. Lee, 1879.

Thirty years have scarcely passed away since one or two lectures on the diseases peculiar to women comprehended all that the most eminent teachers had to offer. But within these two or three decades various types of vaginal specula have appeared from week to week, with singular regularity. Many of these instruments, by spreading the fame or stimulating the pride of their inventors, rapidly fulfilled the essential part of their mission. It was with Sims' speculum and the lateral method of speculum examination that gynæcology received its great impulse. We are advocates of the opinion expressed in the second chapter of this book, that "in a single generation the use of this instrument has advanced the knowledge and treatment of the diseases, and especially the injuries of woman, from profound ignorance to a front rank, if indeed, not beyond that of any other branch of surgery." When the way had been opened by Sims' and other specula, for the more intelligent study of the reproductive organs of woman, a period of experiment followed and of this period modern gynæcology is the logical result. But respecting uterine pathology and theraputics the mass of the profession is yet in unstable equilibrium. The literature of the subject, pregnant with opinions and replete with promises, contains much that is uncrystallized and unsatisfactory. The enthusiasm of the

last generation has produced material in abundance, all of which is admirably compiled but not sifted. The profession of the whole world, therefore, has awaited with no ordinary anticipation and now receives with distinguished welcome, an author whose ability and experience qualify him to comprehend the subject in an original work containing what he knows, not what others have said. Such a work is now under review. A work almost as remarkable for the error which it omits or condemns as for the truth which it contains.

For many years the Woman's Hospital, in the State of New York, was the only institution of its special character in the world, and for this reason it afforded unparalleled advantages for continued observation of individual cases, and therefore for testing the merit of the many brilliant operations which had been introuced and which have marked the progress of this American specialty.

Dr. Emmet has been connected with this institution since its opening in 1854, and the history of his entire service includes a large majority of its patients and surgical operations. To these clinical advantages have been added those of his "private hospital and of an extensive consulting practice." His material, therefore, for original observation and generalization has been exceptional and unequaled. His previous literary contributions though not voluminous show ample evidence of honest and careful observation, of original, conservative and logical thought.

From the preface may be quoted the following detached sentences:

"This work is essentially a clinical digest. It includes the results of my individual experience and aims to represent the actual state of gynæcological science and art. * * * With the exception of two plates taken from Savage's work, and some of the instruments, all the illustrations are original, the drawings having been furnished by myself. In attempting to ascertain and formulate the laws which apply to disease and to analyze the results of treatment, I have compressed numerous histories into a number of statistical tables which present in brief space information that hundreds of pages would scarcely have sufficed to contain in detail. Their parallel, it is believed, is not to be found in the whole range of gynæcological literature.

Chapter I, on the Relations of Climate, Education and Social Conditions to Development, fully indorses the views of the late

Dr. Edward H. Clarke,* of Boston, and claims that the influence of our American climate, and our educational and social systems is "even more serious than he has represented." If this chapter be an exaggeration its error is certainly on the safe side.

Chapters II and III are given to a consideration of the instruments usually found in a complete gynæcological case, and are profusely illustrated by engravings. It is noticable that these instruments, with few exceptions, bear the name either of Emmet or Sims. To one or two paragraphs we invite special attention:

"As long as the sole use of the speculum was to bring the cervix into view and to facilitate the passage of the porte-caustique, in the treatment of a supposed ulceration, the cylindrical speculum sufficed. With the advance of knowledge in the treatment of uterine disease it became necessary to gain more space and light, and the cylindrical speculum has gradually been superceded by various instruments with expanding blades to open the upper portion of the vagina. * * * I have known both retroversion and prolapse to occur from repeated use of the valvular speculum, which had stretched the anterior wall of the vagina. The amount of light and space obtained by any of these instruments is very small compared with what is afforded by Sims', and they are useless for all surgical purposes. Full justice, in the light of our present knowledge, cannot be done in the treatment of uterine disease by any other instrument than this perineal retractor, or some other based upon the same principle and like it capable of exposing the whole vagina.

This chapter contains a description of the author's method of applying the vaginal tampon for uterine hæmorrhage, a method superior to all others.

Chapter IV: Physical Examination of the Female Pelvic Organs. Form for record of cases. The dangers of untimely and unskillful exploration of the uterus, especially when old or recent cellulitis be present are clearly indicated. Profoundly impressed with the importance of this caution, the author repeats it many times in the remaining chapters. The young practitioner and student will appreciate the minute and full directions here given for the accurate diagnosis of diseases. Simpson's sound is condemned as a dangerous instrument and the fine silver probe is substituted as safer and in the skillful hands more efficient.

*Sex in Education, or a fair chance for the Girls, Boston, 1873. The Building of a Brain, Boston, 1874.

Chapters V and VI are given to the Causes of Diseases Reflex and Direct and to the Principles of General Treatment.

Chapters VII and VIII on Local Treatment deplore the lack of method which has always characterized the madness of good doctors in local applications to the uterus. We fully commend all that is said of the hot water vaginal douche, since in our own experience this agent alone has proved more useful than all other local treatment combined. The following is important:

"No plan of treatment could be more rational, or appeal more forcibly to the good judgment of every one. But, unfortunately from a neglect of details, it is rare that the slightest benefit is derived from the use of these injections, although so many years have elapsed since the profession has been fully informed as to their action."

The author then explains his own method of applying the douche and points out the causes of failure in others.

The actual cautery, the mineral acids, nitrate of silver and all escharotics are justly condemned as productive of more evil than good. The author says:

"If the so-called ulceration of the cervix be accepted as a cause and not an effect, the use of the caustic is consistent practice, and should be persevered in until the surface is healed.

But if it be held that the increased secretion is simply an attempt of nature to relieve an obstructed venous circulation, and that the erosion is a surface from which the epithelium has been washed away by the discharge constantly flowing over it, then such a course of treatment is to be deemed not only irrational but most hurtful. A whole generation of physicians has been misled by the delusion of *chronic inflammation and ulceration* of the uterus, conditions which no one has yet been able to demonstrate on the dead body."

We regret that these chapters on local treatment may not receive the attention which they merit from every man who holds contrary opinions. Before such a man makes another caustic application to the uterus it is his duty to weigh the evidence contained in this book and be convinced that the hard contracting scar surface which must be substituted for the epithelial membrane before the supposed ulcer can be removed is not productive of lasting evil. We are convinced of the soundness of Emmet's views, that the caustic always results in destruction of the mucous follicles and frequently in hypertrophy of the uterus and disordered innervation and circulation in the pelvis.

Injection of the uterine cavity is permitted and under certain conditions enjoined if the canal be prepared by previous dilation to admit free return of the injected fluid, otherwise it is condemned as a dangerous procedure. Dilatation of the canal by tents is a subject to which the author has evidently given much attention. He fully exposes the advantages of their use and the dangers of their abuse.

The author's conservatism is expressed in the following quotation:

"We should have the fear of cellulitis always before us, in the treatment of these diseases: as common as this complication is from cold and from other causes, it has its origin quite as frequently in carelessness on the part of the practitioner. We should never introduce the probe, a sponge tent, or an application within the uterine cavity, if the slightest indication of cellulitis can be detected. Nor should we attempt to correct a displacement of the uterus as long as any tenderness attributable to inflammatory origin can be detected by the finger. The female organs of generations have been mercifully endowed with a degree of tolerance to injury not possessed by the male, and woman is thus protected that she may be able to bear the perils of gestation. But few however of the many physicians who undertake to treat these diseases fully realize that there is naturally a limit to this immunity. No portion of the body has suffered more in consequence of incapacity on the part of members of the profession. * * * * * * * Under the guise of surgery the uterus has been subjected to a degree of malpractice, which would not have been tolerated by any other portion of the body; its cavity has been, and is still made the receptacle for agents so destructive that no conscientious man would employ them for the treatment of diseases in any other portion of the body without a full appreciation of his responsibility. But I trust that we have already passed the heroic age. * * *"

These two chapters are eminently conservative and satisfactory. They are full of precepts and suggestions of great practical value, and deserve not carelessly to be read, but profoundly to be studied. The practitioner who fortunately follows them will stand on a decided vantage ground.

Chapter IX, on Ovulation and Menstruation, contains fifteen exhaustive tables of statistics drawn from the author's extensive observation, and must furnish much new material for generalization and speculation. The author regards the physiology of menstruation as yet far from being fully settled, but respecting its relation to the uterine mucous membrane, believes with Tyler

Smith and others, that this membrane is disintegrated and thrown off at every period.

Chapter X treats of the Various Menstrual Irregularities, as symptoms, not as diseases. Disordered innervation and circulation and faulty nutrition of the uterus, are regarded in general as the immediate causes of painful menstruation. Mechanical dysmenorrhœa from flexions and other causes of obstruction in the uterine canal is thought to be very much less common than the popular opinion would indicate. Division of the cervix therefore is seldom advised, and the various forms of dilatation are to be invoked rather for the purpose of changing the condition of circulation in the endometrial membrane and the adjacent tissues than for the purpose of overcoming any obstruction to the passage of blood through the canal. We believe the author to be right in this matter, that the effect of dilatation upon the membrane is to hasten by pressure its periodical fatty degeneration and disintegration, thereby to relieve congestion by hastening the flow which may become established as soon as this membrane is cast off. We know of no other work which contains so much that is reliable and valuable on the subject of abnormal changes in the menstrual flow.

Chapter XI. Congenital Absence and Accidental Atresia of the Vagina; Mode of operating for Establishing the Canal and for Evacuating Retained Menstrual Blood.

Dr. Emmet completes the vaginal canal and gives free exit to all retained menstrual fluid in one operation and washes out the uterine cavity with warm carbolized water for the prevention of blood poisoning. He also employs the glass vaginal dilator of Sims in the artificial vagina until the process of healing is complete. His own success and that of others who have employed the same method has been exceptionally good. This chapter is well illustrated by wood cuts and contains a tabular statement of the author's experience of twenty-two cases.

Chapter XII, on Pelvic Hematocele, includes three engravings and a full history of the literature of the subject.

Chapter XIII. Diseases of the Pelvic Cellular Tissue. Dr. Emmet stands far in advance of the time in his appreciation of the relations of cellulitis to the diseases of women.

He says: "This disease is by far the most important one with which woman is afflicted. Many of the disappointments and bad results so often complained of in the management of diseases of women, in general practice, may be attributed to the existence of unrecognized cellulitis.

* * * * I am confident that the greatest advances yet to be made in this branch of surgery will be from the immediate study of the cellular tissue of the pelvis. We shall there find the key to many of the patological changes now treated as uterine disease. * * * * To illustrate, the circulation in a portion of the cellular tissue may become obstructed from some cause (such as cellulitis) with the effect of producing congestive hypertrophy of the uterus from partial stagnation. One of the first attempts of nature would be to relieve temporarily this condition by an increase of secretion from the mucous follicles. As this discharge continued to flow the epithelium would at length be lost, and what has hitherto been termed ulceration would be produced.

The statistical history of three hundred and three cases is given in a number of tables which present the subject in its great variety of relations. These tables, five in number, are among the most elaborate in the book.

Chapters XIV, XV, XVI, XVII, XVIII and *XIX* are mainly devoted to the various displacements of the uterus. Time and space forbid an adequate review of these chapters. They include numerous illustrations and a vast amount of statistical information. Division of the cervix for flexions, except in comparatively rare instances, intra-uterine stem pessaries, pessaries having external attachments, sponge pessaries and pessaries which press upon the anterior wall of the uterus are condemned as dangerous or useless.

The author's modification of Sims' operation for cystocele is the best ever devised, since it not only replaces the prolapsed anterior vaginal wall, but also causes the uterus to be held temporarily in position until perineal support can be gained by the restoration of the perineal body which is almost invariably wanting in such cases.

Chapter XX. Laceration of the Perineum. The author's original contributions on this subject are for the first time given to the profession in book form. His operation of perineorrhaphy in which the rectocele is used as material of which to form the new perineal body instead of making a separate operation for its removal, and his method of passing the sutures for the restoration of the sphincter ani muscle, may be regarded as perfect.

Chapter XXI. Inversion of the Uterus.

Chapter XXII. Subinvolution.

Chapters XXIII and XXIV. Laceration of the Cervix Uteri. These chapters are entirely original and exhaustive. They are destined to revolutionize the entire pathology and treatment of so-called hypertrophy, elongation and ulceration of the cervix. We are so impressed with the vast importance of this subject that we make the following somewhat lengthy quotation:

"As soon as the practitioner becomes able to recognize this condition under its different forms, he will be surprised to find a new explanation of all his cases of elongated or hypertrophied cervix as well as those of ulceration. Let him in all such cases simply make the attempt with a tenaculum in each hand to bring the points A and B (fig. 90) together at C, and a revelation will be opened to him. It will be necessary to employ Sims' speculum or some other instrument of the same kind, for otherwise the condition will not be detected. This I believe to be difficult with any valvular or cylindrical speculum, for these put the parts on the stretch. To this fact is doubtless due the difference of opinion which exists to-day as to the frequency of this injury. But let any one once master the diagnosis and he will not fail to recognize the protean nature of laceration and will never see another case of hypertrophied cervix or so-called elongated neck; moreover he will never have occasion afterward to amputate the cervix or any portion of it, except for malignant disease. This has been my experience during the past nine or ten years and in so large a practice, that, if hypertrophy and elongation existed I could not have failed to have recognized them. What observer has ever met with either of these conditions except after childbirth or abortion? * * * * I deny that such lesions exist. * * * * *I can but denounce amputation with scissors, knife or cautery of a so-called hypertrophy or elongation of the cervix as malpractice. I also deprecate as even more uncalled for the application of the cautery or caustics to heal a so-called ulceration on surfaces which can be readily united and brought into a healthy condition*" (by suture.)

Since the invention of Sims' speculum this is perhaps the greatest advance in gynæcology, both in the extent of its application, and in the beneficence in its results.

Chapter XXV. Amputation of the Cervix Uteri. The author declares that this operation is never called for except in malignant disease, and says that since he has appreciated the true pathology of what he once supposed to be hypertrophy and elongation, he has had no occasion to perform this operation for the relief of these conditions. The operation is characterized as productive of more unnecessary evil, and therefore as being to a greater extent a malpractice than any other procedure in uterine

surgery. We await with impatience the day when these views may become general.

Chapter XXVI. Cancer of the Uterus, Vagina, Rectum and External Organs of Generation. Considerable evidence is given which points to laceration of the cervix as an exciting cause of epithelioma. The recent observations of Breisky and Veit, in Germany, tend to corroborate this view.

Chapters XXVII, XXVIII and XXIX are given to the subject of *Fibrous Growths of the Uterus.* The history, etiology and diagnosis and general management are satisfactorily presented unless exception be taken to the author's estimate of ergot as a means of radical cure. He bases his opinions upon his own and the observations of Hilderbrandt, of Königsberg.

"From the injudicious use of ergot in large quantities, much harm has resulted. * * * * As a rule, great benefit follows its use when administered in small and continued doses * * * * with the view of exciting only moderate contraction. Ergot should never be given in large doses until after the uterine canal has been dilated and until it be found that the tumor projects sufficiently to warrant the belief that it may become pedunculated by uterine contraction. I have committed this error myself, and have likewise frequently observed it in the practice of others. Should a tumor be found buried in the uterine wall, or so situated that it cannot become pedunculated, large doses of ergot can certainly accomplish no good. But on the contrary, if the uterus be excited to violent contraction without a purpose as it were, an increased amount of blood will naturally flow to the parts, often with the direct effect of causing cellulitis and even peritonitis. * * * A favorable condition for increasing the growth of the tumor."

In direct contrast with the above, is the evidence presented in the memoirs of Dr. Wm. H. Byford, of this city, who reports a number of cases which he regarded as intramural, and which therefore could not be made to pedunculate by uterine contraction, but which appear to have sloughed away under the influence of large and continued doses of ergot.

In a future edition we should be glad to see the ergot treatment more fully considered. The questions are: *Were some of the fibroids reported by Dr. Byford intra-mural, as he believes, or only submucous? May the ergot be relied upon generally to expel or starve out intra-mural fibroids? How great are the dangers from cellulitis, peritonitis, and from the blood poisoning which must accompany a sloughing fibroid of the uterus?*

The most important of Dr. Emmet's contributions to this sub-

ject, is his method of removing submucous fibroids by traction. It is a matter of surprise and regret that so rational a procedure should not have received more attention from previous writers, since it was given to the profession in a memoir several years ago.

Chapter XXX. Diseases of the External Organs of Generation, Cervix and Uterine Canal. The author's ideas of the injurious effects of cicatricial tissue on the cervix resulting from severe caustic applications, or from any other cause, is worthy of more than passing attention. The curette forceps and the dull wire curette are substituted for the sharp curette, which is discarded as dangerous.

Chapters XXXI, XXXII and XXXIII. Vesico-Vaginal and Recto-Vaginal Fistula. No other book contains so much of value relative to vesico-vaginal and recto-vaginal fistula, not excepting the author's own work on vesico-vaginal fistula, published several years ago.

Chapter XXXIV. Diseases of the Urethra.

Chapter XXXV. Cystitis, Stone in the Bladder, and Ureters. The subjects of vesical and urethral disease are admirably and, in many respects, originally treated. It is shown that two or three per cent. of all cases in which forcible dilation of the female urethra is practiced, result in permanent incontinence of urine, and the operation is therefore totally condemned, and artificial vesico-vaginal fistula is substituted as entirely safe and in cystitis more satisfactory.

The eight remaining chapters, including about one hundred pages, are given to diseases of the ovaries, and to ovarian and abdominal tumors.

An essential feature of the book will be found in the marvelous amount of its statistic and tabular information which offers a wide field for speculation, for reflection and for classification of the laws of disease.

The literary execution of the work may not be quite up to the standard of its scientific excellence, but the author's meaning is generally clear and a spirit of candor pervades every page.

In novelty and utility its equal is not to be found in the medical and surgical history of America, or in the gynæcological history of the world. E. C. D.

ARTICLE XIX.—PARESIS OF THE SYMPATHETIC CENTERS FROM OVER EXCITATION BY HIGH SOLAR HEAT LONG CONTINUED AND SUDDENLY WITHDRAWN, ETC., SO-CALLED MALARIA, ITS ETIOLOGY, PATHOGENESIS, PATHOLOGY AND TREATMENT. By Chas. T. Reber, M.D. St. Louis: Geo. O. Rumbold & Co., 1879.

Moralists tell us all things have their use in this world, which all things must include books. The one now before us we imagine has already accomplished its mission. It has probably given pleasure to the author, work to the compositor, printer and binder; but any further service that it can contribute to the world lies beyond the ken of our short-sighted vision. Altogether it is 112 pages, and a very large part of it is made up of extracts. The rest is simply generalized statements and illogical assumptions.

In his chapter on "Animal Temperature," etc., the author makes the statement, "Some birds have a normal temperature of 112° F.," whereas Dr. E. Seguin, as far as we know, an authority on temperature, gives the maximum temperature of the guinea fowl and common duck, the highest temperature given by his tables, as 43.90° C. or 111° F.; only one degree less it is true, but "an inch is a great deal on the end of a man's nose." Then "Horses and cattle have a lower temperature than man." Looking again to E. Seguin's tables we find the French horse 36.80° C. or within .24° of 98° F., which our author gives as the normal human temperature; while the Arabian horse furnishes a temperature of 37.50° C. or 1.5° F. higher than the human normal of our author. The temperature of the ox is given by Dr. E. Seguin as identical with the Arabian horse, while the sheep varies from .23° C. lower to 3° higher than the Arabian horse. It is true the author's term "cattle" may embrace a wider field than the horse, ox and sheep, but it so happens that in the very extensive table of Dr. E. S. the French horse is the lowest tempered on the list.

We were favorably struck with the title of this book, but greatly disappointed on investigating its pages. We do not think it worth while to give a summation of the contents, for as we understand the object of review is to furnish subscribers some

idea of the nature of a work more definite than can be obtained from the title, etc., and we think that is better accomplished by exhibiting the way in which one idea is handled; for when impartially selected the old classical proverb, "from one you may judge the whole," is peculiarly applicable. The author closes his book with the magnanimous sneer at those who are diligently laborious in the cause of positive knowledge. We were about to say that there is nothing worthy of note in the book, but there is, the author would have us discard the word "*malaria*" and substitute it by the term "*hyper-therma.*"

R. T.

BOOKS AND PAMPHLETS RECEIVED.

A Clinical Treatise on Diseases of the Liver. By Dr. Fred. Theodore Frerichs. Translated by Chas. Murchison, M.D., F.R.C.P. Cl., pp. 228. 1879. New York: Wm. Wood & Co. Chicago: W. T. Keener.

Sixth Annual Report of State Board of Health of Michigan for Fiscal Year ending Sept. 30, 1878.

New Theory of the Great Physical Forces. By H. R. Rogers, M.D. 1878. Cl., pp. 107.

Essays in Surgical Anatomy and Surgery. By J. A. Wyeth, M.D. 1879. Cl., pp. 261. New York: Wm. Wood & Co. Chicago: Jansen, McClurg & Co.

A Practical Treatise on Surgical Diagnosis as a Manual for Practitioners and Students. By Ambrose L. Ranney, A.M., M.D. 1879. Cl., pp. 375. New York: Wm. Wood & Co. Chicago: W. T. Keener.

Chemistry; General, Medical and Pharmaceutical, including the Chemistry of the Pharmacopœia. A Manual on the Great Principles of the Sciences and their Application in Medicine and Pharmacy. By J. Anfield, M.A., PH.D. 1879. Leather, pp. 697. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co.

Paresis of the Sympathetic Centers from Over-Excitation by Solar Heat, Long Continued and Suddenly Withdrawn, etc. So-called Malaria; Its Etiology, Pathogenesis and Treatment. By Chas. T. Reber, M.D. 1879. Cl., pp. 112. St. Louis: Geo. Rumbold & Co.

Hints on the Obstetric Procedure. By W. B. Atkinson, A.M., M.D. Cl., pp 121. Phila.: D. G. Brinton.

A Treatise on Therapeutics, Comprising Materia Medica and Toxicology, with Special Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, Jr., M.D. Third edition, revised and enlarged. Cl., pp. 711. 1879. Phila.: J. B. Lippincott. Chicago: Jansen, McClurg & Co.

On the Diseases of the Abdomen, comprising those of the Stomach and Other Parts of the Alimentary Canal, Œsophagus, Cæcum, Intestines and Peritoneum. By S. O. Habershorn, M.D., Lond. With illustrations. Second American from Third English edition. Cl., pp. 554. 1879. Phila.: H. C. Lea. Chicago: Jansen, McClurg & Co.

Rhymes of Science: Wise and Otherwise. With illustrations. Cl., pp. 66. 1879. New York: Industrial Publication Co.

Spermatorrhœa: Its Causes, Symptoms, Results and Treatment. By Robert Bartholow, A.M., M.D. Fourth edition. Cl., pp. 178. New York: Wm. Wood & Co. Chicago: W. T. Keener.

A Guide to Therapeutics and Materia Medica. By Robert Farquharson, M.D. Second American edition. Revised by the Author. Adapted to the U. S. Pharmacopœia by F. Woodbury, M.D. Cl., pp. 498. 1879. Phila.: H. C. Lea. Chicago: Jansen, McClurg & Co.

Practical Instructions in Animal Magnetism. By J. P. F. Delouze. Translated by F. C. Hartshome. Cl., pp. 524. 1879. New York: S. R. Wells & Co.

Potts' Disease; its Pathology and Mechanical Treatment. With remarks on Rotary Lateral Curvature. By Newton M. Shaffer, M.D. Cl., pp. 82. 1879. New York: G. P. Putnam's Sons.

Demonstrations of Anatomy, being a Guide to the Knowledge of the Human Body by Dissection. By G. V. Ellis. From the 8th and revised edition. Leather, pp. 716. 1879. Phila.: H. C. Lea.

Minutes of the Medical Society of the County of New York, 1806–1878. Part I.

Transactions of the American Ophthalmological Society; 12th, 13th and 14th Annual Meetings.

Tenth Annual Report of the State Board of Health of Massachusetts. Jan., 1879.

On the Permanent Removal of Hair by Electrolysis. By Geo. H. Fox, M.D. Reprint from *Medical Record*, March 22, 1879.

The Therapeutical Society of New York. Reprint from *New York Medical Journal*, April, 1879.

The Difficulties and Dangers of Battey's Operation. By Geo. J. Englemann. Reprint from Transactions of American Medical Association.

An Address upon the Life and Character of Lunsford Pitts Yandell, M.D. By Richard O. Cowling, A.M., M.D.

National Board of Health Circular No. 3.

Yellow Fever: Its Origin and Relation to Other Malarial Fevers. By J. G. Westmoreland, M.D. Reprint from Transactions of Medical Associations of Georgia.

Iritis and Some of its Dangers. By S. J. Jones, A.M., M.D. Reprint from Transactions of Illinois State Medical Society. 1877.

Affections of the Lachrymal Apparatus. By S. J. Jones, A.M., M.D. Reprint from Ill. State Medical Society, May, 1878.

The Present State of Otology. By S. J. Jones, A.M., M.D. Rep. from Ill. State Med. Soc., 1878.

Osteotomy for Deformity of the Legs. By Chas. T. Poore. Rep. from *Med. Record*, April 26, 1879.

Inhalations in the Treatment of Pulmonary Diseases. By F. H. Davis, M.D. Reprint from *Detroit Lancet*, May, 1879.

Urethrismus or Chronic Spasmodic Stricture. By F. N. Otis, M.D. Reprint from *Hospital Gazette*, April 19, 1879.

Circulars of Information of the Bureau of Education, No. 1, 1879: Training Schools for Nurses.

Reports with Analysis on the Apollinaris Spring, Neuenahr, Rhenish Prussia, 1878.

National Board of Health Organization, etc.

Transactions of the State Medical Society of Arkansas; its Second Annual Session.

A Treatise on the Horse and Its Diseases. By J. B. Kendall, M.D.

TETANUS CURED BY NERVE STRETCHING. (*Cincinnati Lancet and Clinic, Jan.* 18.) Dr. Ransohoff reports the first *successful* case in this country of nerve stretching for tetanus. The patient, æt. 13, received a trivial injury to the foot from a piece of rusty iron. Tetanic symptoms appeared on the eighth day. On the twelfth day the posterior tibial nerve was well stretched, and from this time the symptoms improved and the patient was finally discharged cured. Of the five previous cases in which the operation has been resorted to for traumatic tetanus, three were by Prof. Vogt, with two successes, one by Verneuil, successful, and one partial success by Dr. Drake, of Canada.

Obituary.

JOHN MAYNARD WOODWORTH.

IN MEMORIAM.—The death of Surgeon General Woodworth has caused a profound feeling of sorrow wherever he was known, and especially in Government official circles. Notice of his death was officially promulgated by the Treasury Department as follows:

TREASURY DEPARTMENT, Washington, March 14, 1879.

To the Medical Officers of the U. S. Marine-Hospital Service:

It is my painful duty to announce to the Medical Officers of the Marine Hospital Service, the death of Surgeon-General John M. Woodworth, which occurred in this city March 14th, 1879.

Surgeon-General Woodworth was born in Chemung Co., New York, August 15th, 1837. He entered the service of the United States as an Acting Assistant Surgeon of the Army in 1862, was soon after appointed Assistant Surgeon of Volunteers, and in 1863 promoted to Surgeon, and afterward to Medical Inspector and Medical Director of the Army of the Tennessee. He was previous to his leaving the Army brevetted Lieutenant-Colonel. His connection with the Marine-Hospital Service dates from its reorganization in 1871, and the history of the Service since that date is mainly identified with his own, for the work of reorganization has been solely intrusted to him since its commencement. As a mark of respect to the memory of so distinguished an officer, whose fame as a sanitarian was not only national but world-wide, the flags of all U. S. Marine Hospitals, will be displayed at half-mast on the day following the receipt of this order. Respectfully, (Signed) JOHN SHERMAN,

Secretary of the Treasury.

Dr. John M. Woodworth was born in Chemung Co., N. Y., Aug. 15th, 1837, and died March 14th, 1879. The year following his parents came to Illinois and settled on a farm near Kaneville, Kane Co. At the age of thirteen years he entered the Christian life which thereafter ever showed its impress upon all his acts both private and official. He went to Chicago when a young man and engaged in the drug business with his brother, who was a practicing physician. Being interested in scientific subjects, he became a member of the Chicago Academy of Sciences, and did a great deal of work toward putting it on a sound basis and increasing its usefulness. To this end, and at the instance of Robert Kennicott, the founder of the Academy, he spent a year at the Smithsonian Institution at Washington with Profs. Henry and Baird, securing duplicates for the Academy. After returning he took up the study of medicine, graduating from the Chicago Medical College in the spring of 1862. Immediately following his graduation he received an appointment as Acting Assistant Surgeon at Camp Douglas, and soon thereafter was appointed Assistant Surgeon of the First Illinois Light Artillery, and assigned to batteries A and B, recruiting in Chicago. He was subsequently promoted to the rank of Surgeon, and appointed Medical Inspector of the Fifteenth Army Corps, commanded by Gen. Logan. At the close of the war he had attained the position of Medical Director of the Army of the Tennessee, with the rank of Brevet Lieutenant-Colonel in recognition of efficient service. Before resuming practice, he went to Europe with Dr. E. O. F. Roler, of Chicago, and remained abroad a year, traveling and studying. On his return he formed a partnership with the venerable Dr. Ira Hatch, of Chicago, and entered active practice. In 1867 he was chosen Professor of Comparative Anatomy by the Faculty of the University of Chicago, and afterwards was appointed Professor of Physiology at the Chicago Medical College. At the same time he held the position of Surgeon of the Soldiers' Home and Examining Surgeon of the Pension Service. These positions he continued to fill until, on the passage of the act reorganizing the Marine Hospital Service, in 1871, he received the appointment of chief of the newly-created bureau, the duties of which office

called him to Washington, where he has since resided. It is in this latter position that he has done his most important work. Within the necessary limits of this sketch it would be impossible to give any adequate idea of the amount and character of the labor involved, not only in correcting the abuses which had grown up under the previous no-system of furnishing relief to sick sailors, but in carrying into effect the provisions of an act which, on its face, was crude and vague to a perplexing degree. Dr. Woodworth labored incessantly and unsparingly, both of himself and others, to remedy these defects; and so successfully that his untimely demise cannot affect the permanency of the service he has rendered. His fitting monument is in the compact, efficient, economical organization he has left behind him which supplies medical and surgical relief to over 40,000 sailors, composing our commercial navy.

He has left his impress on hospital construction and administration; the Marine Hospital at Lake View, a model of the best of the old style, and that at San Francisco, embodying the improvements and reform of the modern styles.

He was complimented in general orders for his energy in the establishment of field hospitals during the Atlanta campaign, and again, in the subsequent campaign, for his moving ambulance hospital, which carried one hundred wounded men from Atlanta to Savannah, and placed them in hospital there without the loss of a single life, although a number of important operations had to be performed by the way. His principal scientific works and papers are: the "Mystery of Life," published in 1871: "Regulations of the United States Hospital Marine Service," 1873; "Cholera in 1873 in the United States;" "Migrants and Sailors in their Relation to Public Health;" "Safety of Ships and those who travel in Them," and "Quarantine with Reference to Yellow Fever." His work on the "Nomenclature of Diseases," 1874, is the standard reference of the Marine Hospital Service.

With his work in connection with epidemic disases—notably in connection with the cholera epidemic of 1873, and the yellow fever epidemic of 1878—both the medical profession and the public are well informed. The bulletins from his office, collating the facts of the public health in almost all civilized countries, are

rapidly acquiring a value similar to the weather bulletins of the Signal Service. It is hoped that a fitting successor has been found to carry to completion the efforts he has inaugurated in this and other directions.

Dr. Woodworth married Miss Maggie Hannah of Chicago, in 1873, and his family is connected with many of the oldest citizens of our city.

A little time before his death he became conscious. Then he dictated some important letters; sent telegrams to Mobile and New Orleans in relation to the formation of Boards of Public Health; also gave directions about a $500 check, which he had for the yellow fever fund. Vice President Wheeler asked him if he was ready to go. He said "I am ready." That Christ had died for him. Then placing his hand upon his breast said Christ was there, and to his friends farewell forever. The unconscious state soon returned, and in a few hours he sank peacefully away, as in a quiet slumber.

The funeral services of Dr. Woodworth were held in Washington on the 16th, and the body was laid away in the beautiful Rock Creek Cemetery. The funeral, which was an imposing one, was managed by the Treasury Department. Five Bureau officers—Genl. Raum, Commissioner of Internal Revenue; Mr. Burchard, Director of the Mint; Gen. Schofield, Register of the Treasury; Col. Irish, Superintendent of the Bureau of Engraving and Printing; and Judge Carter, First Comptroller of the Treasury—acted as pall-bearers.

The President, Secretary Sherman, Assistant Secretary Hawley, Senator Logan, and a great concourse of persons in private and official life attended. The services were conducted by Drs. Cuthbert, of the First Baptist Church, Paxton, of the N. Y. Avenue Presbyterian Church, Rankin, of the Congregational Church, and Rev. C. K. Marshall, of Vicksburg, Mississippi. The floral offerings, which were of the choicest flowers, were most beautiful. A large crown surmounted by a cross of immortelles and violets; a cross and anchor were sent by Mrs. Hayes. Secretary Sherman sent a cross, and the employes of Dr. Woodworth's office sent an anchor which was surrounded by a fine floral wreath.

A special meeting of the executive committee of the Yellow Fever National Relief Commission was held Saturday evening, March 15th, at Willard's Hotel to take action relative to the death of Surgeon-General Woodworth. There were present ex-Governor Shepherd (chairman), Lewis J. Davis, Simon Wolf, George Hill, jr., A. S. Solomons, John F. Cook, ex-Senator Pease, Col. McArdle, Captain Lake, and Rev. C. K. Marshall, of Mississippi, and William Dickson, secretary.

Ex-Governor Shepherd announced the object for which the meeting was called, and referred to the valuable services of the deceased as a member of the Commission.

Simon Wolf, Esq., presented the following resolutions, which were adopted:—

The Yellow Fever National Relief Commission having learned with profound regret, of the sudden death of their distinguished colleague, John M. Woodworth, and being desirous to fittingly express its sorrow, resolves that,

WHEREAS, John M. Woodworth, Surgeon-General, of the Marine Hospital Service, and a member of this Commission, has been taken from our midst, and

WHEREAS, we, the members of the Commission, desires to honor his great work, integrity, and nobility of character and devotion to duty, therefore,

Resolved, That in the death of John M. Woodworth science has lost an eminent disciple, humanity an earnest laborer, and the United States Government an active, indefatigable, and zealous official.

Resolved, That as an associate he was gentlemanly, courteous, self-sacrificing, and gave the fullest measure of his ability and influence to the success of the aims and objects of this Commission, and that he fell a soldier in the sacred cause of humanity, his large heart and brain being enlisted in the promotion of such legislation as would nationalize sanitary science, and prevent the introduction and spread of contagious diseases.

Resolved, That we tender to his widow our profound sympathy and respect, and that the name and memory of John M. Woodworth will ever be held in high esteem as a benefactor of his race.

Resolved, That this Commission attend his funeral in a body, and that a copy of these resolutions be transmitted to his bereaved family, and published in the daily papers of this city.

Colonel McArdle, of Mississippi, delivered a beautiful and eloquent tribute to the memory of the diseased, and as a representative of the section stricken by the pestilence last summer, related in detail the philanthropic and noble services rendered by Dr. Woodworth to aid his people, who would mourn in sadness the death of their stranger benefactor. The Rev. C. K. Marshall also spoke in fitting terms of the deceased.

At a meeting of the principal officers of the Treasury Department, held at the rooms of the Secretary, on the fourteenth day of March, 1879, the following named gentlemen were appointed to prepare resolutions expressive of their appreciation of the character and services of Dr. John M. Woodworth, Supervising Surgeon General of the Marine Hospital Service, whose death had been announced, and their sympathy with the family of the deceased, and to make arrangements to attend the funeral: Mr. French, Assistant Secretary; Mr. Raum, Commissioner of Internal Revenue; Mr. Porter, First Comptroller; Mr. Burchard, Director of the Mint; Mr. Johnson, Commissioner of Customs.

At an adjourned meeting, on the fifteenth day of March, 1879, said committee reported the following resolutions, which were adopted:

The death of one whose life has been filled with good deeds, often does not excite that sense of loss which is necessary to create completeness of sorrow. His good deeds so fill the memory that he seems yet to survive in them, and being dead he yet seems to live. The life of a great physician is a perpetual benefaction. He appears to live for others rather than himself. Dr. John M. Woodworth, whose death we now lament, led a strenuous life, highly devoted to duty.

Beginning as a pharmacist, dependent for a livelihood upon his own faculties, his aspiring nature instinctively sought a broader and higher field of exertion. He engaged zealously in medical studies, graduated as a doctor of medicine, and being by nature earnest and resolute, immediately started on a career of professional distinction. He sought intercourse with eminent minds,

and as he was zealous to receive, so, happily, he was zealous to impart knowledge. At an early age he won attention by the productions of his pen, and was sought as a member of various learned societies.

Entering the army as an assistant post surgeon, the force of his merit raised him successively from step to step in promotion, until at the age of 27 he had risen to be medical director and inspector of the army of the Tennessee. He received a brevet in token of highly meritorious service in Sherman's great march to the sea.

When the war closed, though his learning and experience were large, his aspiration for greater knowledge could not be held in check. He visited Europe, studying in the hospitals of Berlin and Vienna, and devoting himself with unremitting assiduity, until his savings were exhausted, to exploring the wider fields of professional knowledge. It was not long after his return until he was invited to take the honorable post at which he has fallen, and which he has magnified by his learning and administrative ability, and organized to be an instrument of great and enduring usefulness. When the yellow fever broke out last summer, and ravaged so great a part of the South, his soul was touched by the manifold recitals of sufferings and sorrow, and he burned with an inextinguishable ardor to make his office an efficient means to vanquish the disease then, and to prevent its return thereafter.

He was quick, when the horrid specter of the Asiatic plague rose in the East, to begin to study of the origin and progress of that malady, and to devise methods by which its access to our own shores might be prevented, and if all precautions failed, its ravages might be mitigated and diminished. In the pursuit of these investigations, and in the organization of his office to meet the great emergencies which it might be invoked to confront, he literally allowed himself no rest. The hours of each day seemed too brief for the tasks that crowded upon it. Though he felt the sense of overwork and exhaustion, labor to him was pleasure, because duty, as he thought, invoked him to it.

His manner was modest and unobtrusive, and in domestic life singularly sweet, but his spirit was heroic. In the presence of a great duty, demanding high exertions, health and life were held

of no account, success must be attained; he did not pause to think whether he might enjoy a part of its fruition. When just before his death he awoke for a moment to consciousness, he asked, "Where am I to lie?" And when told where his remains would be consigned to repose, a smile of satisfaction irradiated his features and the avenues to the world were then closed forever. No soldier in the field, dying in a good cause, ever offered up his life more disinterestedly than he has done in sacrificing his own in devising means for saving the lives of others.

With this estimate of the life and character of our departed friend, it is

Resolved, That we lament the death of one whose life gave promise of such extended and continuing usefulness, and we tender to his devoted wife and to his kindred our sincere sympathy.

Resolved, That the heads of the various bureaus of this Department will in a body attend the funeral of Dr. Woodworth, tomorrow at Le Droit Park; that the proceedings be placed on the records of this Department; and that a copy of the preamble and resolutions be transmitted to the widow of the deceased, and furnished to the daily papers for publication.

HENRY F. FRENCH,
GREEN B. RAUM,
ALBERT G. PORTER,
H. C. BURCHARD,
W. C. JOHNSON,
Committee.

M. RANVIER has been lately devoting some attention to the study of the structure of the cornea, and on February 8th communicated the results to the Société de Biologie. According to him, the corpuscles of the cornea cannot be seen in the normal eye of a living animal; they only appear when the eye in question has been kept for some time in aqueous humor. If the cells of the cornea become visible under the influence of steam, this is due to imbibition by the membrane. The fibers of the cornea are very hygrometric. A bull's eye, if plunged into distilled water, will increase in diameter several times.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, June 2 and 16.
West Chicago Medical Society—Mondays, June 9 and 23.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.